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OM protein - protein search, using sw model

Run on: October 26, 2004, 07:25:28 ; Search time 158 Seconds  
(without alignments)

45.409 Million cell updates/sec

Title: US-10-619-910-11  
Perfect score: 111  
Sequence: 1 INPETYRPPCCAPQLNLAIS 20

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2002273 seqs, 358729239 residues

Total number of hits satisfying chosen parameters: 2002273

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 200 summaries

Database : A\_Geneseq\_23Sep04:\*  
1: geneseqp1980s:\*  
2: geneseqp1990s:\*  
3: geneseqp2000s:\*  
4: geneseqp2001s:\*  
5: geneseqp2002s:\*  
6: geneseqp2003as:\*  
7: geneseqp2003bs:\*  
8: geneseqp2004s:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	111	100.0	20	3	AAV93365 Amino act
2	111	100.0	97	2	AAR53359 Osteogeni
3	111	100.0	97	2	AAW89696 Human ost
4	111	100.0	97	2	AAW95444 Conserved
5	111	100.0	98	1	AAV95681 Human ost
6	111	100.0	102	1	AAV95682 Human ost
7	111	100.0	102	1	AAV53360 Osteogeni
8	111	100.0	102	2	AAW36897 Human ost
9	111	100.0	102	2	AAW36889 Human ost
10	111	100.0	102	2	AAW36872 Human ost
11	111	100.0	102	2	AAV16708 WO9914235
12	111	100.0	102	2	AAW89697 Human ost
13	111	100.0	102	2	AAW95443 Conserved
14	111	100.0	102	3	AAV92569 OP-1 fing
15	111	100.0	102	3	AAW03534 Human OP-
16	111	100.0	102	3	AAW02800 Human OP-
17	111	100.0	102	4	AAU10599 Human ost
18	111	100.0	102	5	AAW76281 Mature hu
19	111	100.0	102	8	ADG14142 Human ost
20	111	100.0	102	8	ADG36196 Transform
21	111	100.0	111	3	AAV92027 Human bon
22	111	100.0	114	2	AAW53361 N-termina
23	111	100.0	114	2	AAW95454 N-termina
24	111	100.0	116	2	AAW53362 N-termina
25	111	100.0	116	2	AAW95453 N-termina

26	111	100.0	117	2	AAR53363 N-termina
27	111	100.0	117	2	AAW95452 N-termina
28	111	100.0	117	3	AAV92595 Trypsin t
29	111	100.0	117	3	AAW09548 Trypsin t
30	111	100.0	117	3	AAW02814 Human try
31	111	100.0	119	3	AAR53364 N-termina
32	111	100.0	119	2	AAW95451 N-termina
33	111	100.0	119	6	ABG76026 Human OP-
34	111	100.0	131	5	ABW07963 Human BMP
35	111	100.0	132	2	AAR53365 N-termina
36	111	100.0	132	2	AAW95450 N-termina
37	111	100.0	138	2	AAV08297 Human gro
38	111	100.0	139	2	AAW23187 Osteogeni
39	111	100.0	139	2	AAR27285 Mature hu
40	111	100.0	139	2	AAR53366 N-termina
41	111	100.0	139	2	AAW33921 Morphogen
42	111	100.0	139	2	AAR33398 Human mat
43	111	100.0	139	2	AAW31467 Mature P3
44	111	100.0	139	2	AAW46724 Human mat
45	111	100.0	139	2	AAW60967 Mature hu
46	111	100.0	139	2	AAW71974 BMP-7, 10
47	111	100.0	139	2	AAW00222 Mouse mat
48	111	100.0	139	2	AAW00221 Human mat
49	111	100.0	139	2	AAW40180 Human top
50	111	100.0	139	2	AAW36871 Mature pr
51	111	100.0	139	2	AAW54064 Bone morph
52	111	100.0	139	2	AAW84215 Bone morph
53	111	100.0	139	2	AAW95449 Mature hu
54	111	100.0	139	3	AAV70755 Mature mo
55	111	100.0	139	3	AAV92594 Mature mu
56	111	100.0	139	3	AAW09547 Mature OP
57	111	100.0	139	3	AAV57218 Human ost
58	111	100.0	139	3	AAW02813 Human mat
59	111	100.0	139	5	AAW51924 Human TGF
60	111	100.0	139	7	ADW04098 Human pro
61	111	100.0	139	8	ADH11607 Human bon
62	111	100.0	139	8	ADK90626 Human ost
63	111	100.0	141	8	ADK72628 rh BMP-7
64	111	100.0	161	2	AAW29285 Human ost
65	111	100.0	161	3	AAW18757 Subunit D
66	111	100.0	169	2	AAW44749 Osteogeni
67	111	100.0	169	2	AAW85765 OP1A fusi
68	111	100.0	169	2	AAW44305 Human ost
69	111	100.0	169	2	AAW89682 Osteogeni
70	111	100.0	169	2	AAV43316 Osteogeni
71	111	100.0	169	7	ADJ62684 Human ost
72	111	100.0	169	8	ADW52755 Human ost
73	111	100.0	178	3	ADW80493 Human ost
74	111	100.0	178	3	AAW18761 Fusion of
75	111	100.0	179	2	AAW18759 FUSION OF
76	111	100.0	179	2	AAW29287 PING3355
77	111	100.0	179	2	AAW29288 PING3356
78	111	100.0	179	2	AAW29289 PING3357
79	111	100.0	179	2	AAW29301 BPI pepet
80	111	100.0	190	3	AAW18761 Fusion of
81	111	100.0	194	2	AAW29304 BPI pepet
82	111	100.0	195	2	AAW29302 BPI pepet
83	111	100.0	317	2	AAW51656 Osteogeni
84	111	100.0	317	2	AAW85766 OP1B fusi
85	111	100.0	317	2	AAW44306 Human ost
86	111	100.0	317	2	AAW89683 Osteogeni
87	111	100.0	317	2	AAV43317 Osteogeni
88	111	100.0	317	7	ADJ62686 Human ost
89	111	100.0	317	8	ADW52757 Human ost
90	111	100.0	317	8	ADW80495 Human ost
91	111	100.0	365	8	ADW05621 Human EXM
92	111	100.0	408	2	AAW44752 Osteogeni
93	111	100.0	408	2	AAW51658 OP1D fusi
94	111	100.0	408	2	AAW85768 Human ost
95	111	100.0	408	2	AAW44308 Human ost
96	111	100.0	408	2	AAW95685 Osteogeni
97	111	100.0	408	2	AAV43319 Osteogeni
98	111	100.0	408	7	ADJ62680 Human ost

99	111	100.0	408	8	ADBS2761	Adbs2761 Human ost
100	111	100.0	408	8	ADMS8499	Adms8499 Human ost
101	111	100.0	431	2	AA07335	AA07335 Human Bon
102	111	100.0	431	2	AA07335	AA07335 Human Bon
103	111	100.0	431	2	AA07335	AA07335 Human Bon
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105	111	100.0	431	2	AA07335	AA07335 Human Bon
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111	111	100.0	431	2	AA07335	AA07335 Human Bon
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119	111	100.0	431	2	AA07335	AA07335 Human Bon
120	111	100.0	431	2	AA07335	AA07335 Human Bon
121	111	100.0	431	2	AA07335	AA07335 Human Bon
122	111	100.0	431	2	AA07335	AA07335 Human Bon
123	111	100.0	431	2	AA07335	AA07335 Human Bon
124	111	100.0	431	2	AA07335	AA07335 Human Bon
125	111	100.0	431	2	AA07335	AA07335 Human Bon
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142	111	100.0	431	2	AA07335	AA07335 Human Bon
143	111	100.0	431	2	AA07335	AA07335 Human Bon
144	111	100.0	431	2	AA07335	AA07335 Human Bon
145	111	100.0	431	2	AA07335	AA07335 Human Bon
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147	111	100.0	431	2	AA07335	AA07335 Human Bon
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150	111	100.0	431	2	AA07335	AA07335 Human Bon
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169	111	100.0	431	2	AA07335	AA07335 Human Bon
170	111	100.0	431	2	AA07335	AA07335 Human Bon
171	111	100.0	431	2	AA07335	AA07335 Human Bon

172	111	100.0	431	4	AA082695	AA082695 Human ost
173	111	100.0	431	5	AA097017	AA097017 Human ost
174	111	100.0	431	5	AA097017	AA097017 Human ost
175	111	100.0	431	5	AA097017	AA097017 Human ost
176	111	100.0	431	5	AA097017	AA097017 Human ost
177	111	100.0	431	6	AA097017	AA097017 Human ost
178	111	100.0	431	6	AA097017	AA097017 Human ost
179	111	100.0	431	7	AA097017	AA097017 Human ost
180	111	100.0	431	7	AA097017	AA097017 Human ost
181	111	100.0	431	7	AA097017	AA097017 Human ost
182	111	100.0	431	7	AA097017	AA097017 Human ost
183	111	100.0	431	7	AA097017	AA097017 Human ost
184	111	100.0	431	7	AA097017	AA097017 Human ost
185	111	100.0	431	7	AA097017	AA097017 Human ost
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188	111	100.0	431	7	AA097017	AA097017 Human ost
189	111	100.0	431	7	AA097017	AA097017 Human ost
190	111	100.0	431	8	AA097017	AA097017 Human ost
191	111	100.0	431	8	AA097017	AA097017 Human ost
192	111	100.0	431	8	AA097017	AA097017 Human ost
193	111	100.0	431	8	AA097017	AA097017 Human ost
194	111	100.0	431	8	AA097017	AA097017 Human ost
195	111	100.0	431	8	AA097017	AA097017 Human ost
196	111	100.0	431	8	AA097017	AA097017 Human ost
197	111	100.0	431	8	AA097017	AA097017 Human ost
198	111	100.0	431	8	AA097017	AA097017 Human ost
199	111	100.0	431	8	AA097017	AA097017 Human ost
200	111	100.0	431	8	AA097017	AA097017 Human ost

## ALIGNMENTS

RESULT 1  
AA093365 standard; peptide; 20 AA.  
ID AA093365 standard; peptide; 20 AA.  
AC AA093365;  
XX  
DT 04-SEP-2000 (first entry)  
XX  
DE Amino acid sequence of an osteogenic peptide.  
XX  
KW Osteogenic peptide; alkaline phosphatase; osteoblast; neogenetic bone;  
KW bone growth; bone fracture; rheumatoid arthritis; osteoporosis;  
KW peridontic disease; bone filler; bone substance.  
XX  
OS Synthetic.  
XX  
PN EPI006126-A2.  
XX  
PD 07-JUN-2000.  
XX  
PF 12-NOV-1999; 99EP-00402815.  
XX  
PR 12-NOV-1998; 99JP-00322075.  
XX  
PA (NISH/) NISHIMURA Y.  
PA (SUZU/) SUZUKI Y.  
PA (TANI/) TANIHARA M.  
PA (KYOC) KYOCERA CORP.  
XX  
PI Nishimura Y, Suzuki Y, Tanihara M;  
XX  
DR WPI; 2000-367955/32.  
XX  
PT Novel osteogenic peptides useful for the treatment and prevention of  
PT fractures.  
XX  
XX Claim 2; Page 22; 22pp; English.  
XX  
XX The present sequence represents an osteogenic peptide. The peptide  
CC

CC accelerates the activation of alkaline phosphatase in osteoblasts to form  
CC neogenetic bone or induces growth of existing bone. The peptide may be  
CC used to prevent or treat bone fractures caused by rheumatoid arthritis  
CC and osteoporosis, as well as for treating periodontic diseases. The  
CC peptide is also useful as a filler in deficient sites of bone, and for  
CC inhibition of decrease in bone substance. The peptides of the invention  
CC are negligible in cytotoxicity and systemic acute toxicity  
XX  
SQ Sequence 20 AA;

Query Match 100.0%; Score 111; DB 3; Length 20;  
Best Local Similarity 100.0%; Pred. No. 9, 5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALIS 20  
DB 1 INPETHKPCCAPTQLNALIS 20

RESULT 2  
AAR53359  
ID AAR53359 standard; protein; 97 AA.

AC AAR53359;  
XX  
DT 25-MAR-2003 (revised)  
DT 01-JUL-2002 (revised)  
DT 06-JUN-1994 (first entry)  
XX  
DE Osteogenic protein OPS.

XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
KM vascularisation; mineralisation; differentiation.  
XX Homo sapiens.

OS  
XX  
PN US5266683-A.

XX  
PD 30-NOV-1993.

XX  
PF 21-FEB-1992; 92US-00841646.

XX  
PR 08-APR-1988; 88US-00179406.

XX  
PR 15-AUG-1988; 88US-00232630.

XX  
PR 23-FEB-1989; 89US-00315342.

XX  
PR 17-OCT-1989; 89US-00422613.

XX  
PR 17-OCT-1989; 89US-00422613.

XX  
PR 22-FEB-1990; 90US-00483913.

XX  
PR 20-AUG-1990; 90US-00569920.

XX  
PR 07-SEP-1990; 90US-00579865.

XX  
PR 18-OCT-1990; 90US-00595543.

XX  
PR 18-OCT-1990; 90US-00600024.

XX  
PR 21-NOV-1990; 90US-00616374.

XX  
PR 04-DEC-1990; 90US-00621849.

XX  
PR 04-DEC-1990; 90US-00621849.

XX  
PR 22-FEB-1991; 91US-00660162.

XX  
PR 20-DEC-1991; 91US-00810560.

XX  
PR 28-JAN-1992; 92US-00827052.

XX (STYC ) STRYKER CORP.

XX Kuberasesampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;

XX WPI; 1993-395405/49.

XX N-PSDB: AAQ53141.

XX New pure mammalian osteogenic proteins - induce cartilage and

XX Claim 6; Col 69-72; 128BP; English.

XX This sequence is a fragment of the osteogenic protein OP1 and is

XX designated OPS (The S is for "Short"). The 97 amino acid C-terminal

CC region of OP1 which is the functional domain of OP1 is present in this  
CC fragment. The osteogenic protein when in association with a matrix can  
CC induce at the locus of an implant the full development cascade of  
CC endochondral bone formation including vascularisation, mineralisation and  
CC bone marrow differentiation. The osteogenic protein can also be used to  
CC repair both bone and cartilage in the treatment of osteoarthritis.  
CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
XX  
SQ Sequence 97 AA;

Query Match 100.0%; Score 111; DB 2; Length 97;  
Best Local Similarity 100.0%; Pred. No. 4, 3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALIS 20  
DB 52 INPETHKPCCAPTQLNALIS 71

RESULT 3  
AAW89696  
ID AAW89696 standard; peptide; 97 AA.

AC AAW89696;  
XX  
DT 20-MAR-2003 (revised)  
DT 24-MAR-1999 (first entry)  
XX

XX Human osteogenic protein OP-1 fragment 335-431.

XX Human; osteogenic protein; OP-1; OPX; endochondral bone formation;  
KM cartilage; craniofacial defect; skeletal disorder; dental disorder;  
XX non-union fracture; osteoarthritis; vascularisation; mineralisation;  
XX bone marrow differentiation.

OS Homo sapiens.

XX  
PN US5863758-A.

XX  
PD 26-JAN-1999.

XX  
PF 23-MAY-1995; 95US-00449700.

XX  
PR 08-APR-1988; 88US-00179406.

XX  
PR 15-AUG-1988; 88US-00232630.

XX  
PR 23-FEB-1989; 89US-00315342.

XX  
PR 17-OCT-1989; 89US-00422613.

XX  
PR 17-OCT-1989; 89US-00422613.

XX  
PR 22-FEB-1990; 90US-00483913.

XX  
PR 20-AUG-1990; 90US-00569920.

XX  
PR 07-SEP-1990; 90US-00579865.

XX  
PR 18-OCT-1990; 90US-00595543.

XX  
PR 18-OCT-1990; 90US-00600024.

XX  
PR 21-NOV-1990; 90US-00616374.

XX  
PR 04-DEC-1990; 90US-00621849.

XX  
PR 04-DEC-1990; 90US-00621849.

XX  
PR 22-FEB-1991; 91US-00660162.

XX  
PR 20-DEC-1991; 91US-00810560.

XX  
PR 28-JAN-1992; 92US-00827052.

XX  
PR 21-FEB-1992; 92US-00841646.

XX  
PR 01-NOV-1993; 93US-00147023.

XX (STYC ) STRYKER CORP.

XX Kuberasesampath T, Rueger DC, Kuberasesampath T, Oppermann H, Ozkaynak E;

XX WPI; 1999-131303/11.

XX Nucleic acid encoding mammalian osteogenic proteins in prepro form - able

XX to induce cartilage and bone formation when implanted in matrix, useful

XX for repairing bone defects.

PS Claim 10; Col 151; 127pp; English.

XX The present invention describes isolated DNA (I) encoding at least one  
CC osteogenically active region of human osteogenic protein-1 in prepro form  
CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
CC that can induce cartilage and endochondral bone formation in a mammal  
CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
CC osteogenic protein (II) produced by expression of transformed mammalian  
CC cells, able to induce bone and cartilage formation; (F) mature OP1  
CC secreted from mammalian cells following expression of the sequence that  
CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
CC proteins able to induce cartilage and bone formation, e.g. for correction  
CC of acquired or congenital craniofacial defects or other skeletal or  
CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
CC in osteoarthritis, or generally wherever bone formation is required. The  
CC proteins induce complete development of endochondral bone, including  
CC vascularisation, mineralisation and bone marrow differentiation. The  
CC present sequence represents a human OP1 fragment. (Updated on 20-MAR-2003  
CC to correct PA field.)

XX Sequence 97 AA;  
SQ

Query Match 100.0%; Score 111; DB 2; Length 97;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQLNNAIS 20  
Db 52 INPETHKPCCAPTQLNNAIS 71

RESULT 4  
AAW95444  
ID AAW95444 standard; protein; 97 AA.  
XX  
AC AAW95444;  
XX  
DT 26-MAR-1999 (first entry)  
XX  
DE Conserved 6 cysteine skeleton fragment from human OP1.  
XX  
DE Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
XX bone morphogenic protein; BMP; growth factor-beta superfamily;  
XX polycystic kidney disease; multicystic dysplastic kidney disease;  
XX ureamic medullary cystic disease; human.  
XX  
OS Homo sapiens.  
XX  
FN W09850061-A1.  
XX  
PD 12-NOV-1998.  
XX  
PE 06-MAY-1998; 98WO-US0092268.  
XX  
PR 07-MAY-1997; 97US-0045909P.  
XX  
PA (BIOJ) BIOGEN INC.  
XX  
PI GJorstrup P, Harris R;  
XX  
PS WPI; 1999-070084/06.  
XX  
XX Treating cystic kidney disease - using renal therapeutic agents or  
XX PT sequences encoding them, especially from the osteogenic protein/bone  
XX morphogenic protein family.  
XX  
PS Claim 3; Page 5-6; 67pp; English.  
CC The invention relates to methods for treating cystic kidney diseases. The

CC method comprises administering an effective amount of a renal therapeutic  
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
CC member of the osteogenic protein/bone morphogenic protein (Op/BMP) family  
CC within a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OP5, OP7,  
CC OP1-16Ser, OP1-16Ileu, OP1-16Met, OP1-16Ala, OP1-16Val, hOP1, hOP1-PP,  
CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat humans  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uraemic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a human osteogenic  
CC protein 1 (OP1) species defining the the conserved 6 cysteine skeleton in  
CC the active region

SQ Sequence 97 AA;  
SQ

Query Match 100.0%; Score 111; DB 2; Length 97;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQLNNAIS 20  
Db 52 INPETHKPCCAPTQLNNAIS 71

RESULT 5  
AAP95681  
ID AAP95681 standard; protein; 98 AA.  
XX  
AC AAP95681;  
XX  
DT 25-MAR-2003 (revised)  
DT 21-AUG-1990 (first entry)  
XX  
DE Human osteogenic protein 1(OP1-1) for osteogenic device.  
XX  
XX Osteogenic device; osteogenic protein; endochondral bone;  
XX bio-degradable matrix.  
XX  
OS Synthetic.  
XX  
FN W08909788-A.  
XX  
PD 19-OCT-1989.  
XX  
PE 08-APR-1988; 88US-00179406.  
XX  
PR 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 23-FEB-1989; 89US-00315342.  
XX 07-APR-1989; 89WO-US001469.  
XX  
PA (CREA-) CREATIVE BIOMOLECULES INC.  
XX  
PI Oppermann H, Kubersamp T, Rueger D;  
XX  
PS WPI; 1989-324203/44.  
XX  
XX Osteogenic devices comprising matrix contg. osteogenic proteins - prepd.  
XX PT by recombinant techniques.  
XX  
PS Claim 9; Page 48; 69pp; English.  
XX  
XX The protein is capable of inducing endochondral bone formation in  
XX CC association with a biocompatible, in vivo biodegradable matrix. The  
XX CC protein is produced by expression of the recombinant DNA in a host cell  
XX CC and comprises more than one polypeptide chain, with an amino acid  
XX CC sequence sufficiently duplicative of OP5, OP7, OP16 or OP1. The  
XX CC protein and the implantable devices enable optimal predictable bone  
XX CC formation. Clinical applications include correction of acquired and  
XX CC congenital craniofacial and other skeletal or dental anomalies, induction



CC of local endochondral bone formation in non-union fractures, periodontal  
CC applies, requiring bone formation and cartilage repair, eg in the  
CC treatment of osteoarthritis. See also AAP95679-P95692 and AAN95097.  
CC (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to  
CC correct PA field.)  
XX  
SQ Sequence 98 AA;

Query Match 100.0%; Score 111; DB 1; Length 98;  
Best Local Similarity 100.0%; Pred. No. 4.4e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNMAIS 20  
DB 53 INPETHKPCCAPTOLNMAIS 72

RESULT 6  
AAP95682  
ID AAP95682 standard; protein; 102 AA.

AC AAP95682;  
XX  
XX 25-MAR-2003 (revised)  
DT 21-AUG-1990 (first entry)  
XX  
XX Human osteogenic protein 1 (OPI-II) for osteogenic device.

DE  
XX  
XX Osteogenic device; osteogenic protein; endochondral bone;  
XX biodegradable matrix.  
XX  
XX Synthetic.  
XX  
XX W08909788-A.

PN  
XX  
XX 19-OCT-1989.  
PD  
XX  
XX 08-APR-1988; 88US-00179406.

XX  
XX 08-APR-1988; 88US-00179406.  
PR 15-AUG-1988; 88US-00232630.  
PR 23-FEB-1989; 89US-00315342.  
PR 07-APR-1989; 89WO-US001469.

XX  
XX (CREA-) CREATIVE BIOMOLECULES INC.

XX  
XX Oppermann H, Kuberassamp T, Rueger D;

XX  
XX WPI; 1989-324203/44.

XX  
XX Osteogenic devices comprising matrix contg. osteogenic proteins - prepd.  
PT by recombinant techniques.  
XX  
XX Claim 10; Page 49; 69pp; English.

XX  
XX The protein is capable of inducing endochondral bone formation in  
CC association with a biocompatible, in vivo biodegradable matrix. The  
CC protein is produced by expression of the recombinant DNA in a host cell  
CC and comprises more than one polypeptide chain, with an amino acid  
CC sequence sufficiently duplicative of COPS, COP7, COPS6 or OPI. The  
CC protein and the implantable devices enable optimal predictable bone  
CC formation. Clinical applications include correction of acquired and  
CC congenital craniofacial and other skeletal or dental anomalies, induction  
CC of local endochondral bone formation in non-union fractures, periodontal  
CC applies, requiring bone formation and cartilage repair, eg in the  
CC treatment of osteoarthritis. See also AAP95679-P95692 and AAN95097.  
CC (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to  
CC correct PA field.)  
XX  
SQ Sequence 102 AA;

Query Match 100.0%; Score 111; DB 1; Length 102;  
Best Local Similarity 100.0%; Pred. No. 4.5e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNMAIS 20  
DB 57 INPETHKPCCAPTOLNMAIS 76

RESULT 7  
AAR53360  
ID AAR53360 standard; protein; 102 AA.

AC AAR53360;

XX  
XX 25-MAR-2003 (revised)  
DT 01-JUL-2002 (revised)  
DT 06-JUN-1994 (first entry)  
XX  
XX Osteogenic protein OP7.

DE  
XX  
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;

KM  
XX  
XX vascularisation; mineralisation; differentiation.

XX  
XX Homo sapiens.

XX  
XX US5266683-A.

XX  
XX 30-NOV-1993.

XX  
XX 21-FEB-1992; 92US-00841646.

XX  
XX 08-APR-1988; 88US-00179406.

XX  
XX 15-AUG-1988; 88US-00232630.

XX  
XX 23-FEB-1989; 89US-00315342.

XX  
XX 17-OCT-1989; 89US-00422613.

XX  
XX 22-FEB-1990; 90US-00483913.

XX  
XX 20-AUG-1990; 90US-00569920.

XX  
XX 07-SEP-1990; 90US-00579865.

XX  
XX 18-OCT-1990; 90US-00599543.

XX  
XX 21-NOV-1990; 90US-00616374.

XX  
XX 04-DEC-1990; 90US-00621849.

XX  
XX 22-FEB-1991; 91US-00660162.

XX  
XX 20-DEC-1991; 91US-00810560.

XX  
XX 28-JAN-1992; 92US-00827052.

XX  
XX (STYK) STRYKER CORP.

XX  
XX Kuberassampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;

XX  
XX WPI; 1993-395405/49.

XX  
XX N-PSDB; AAQ53141.

XX  
XX Claim 7; Col 69-72; 128pp; English.

XX  
XX This sequence is a fragment of the osteogenic protein OPI and is  
CC designated OP7. The sequence is a 102 C-terminal region and functional  
CC domain of OPI. The osteogenic protein when in association with a matrix  
CC can induce at the locus of an implant the full development cascade of  
CC endochondral bone formation including vascularisation, mineralisation and  
CC bone marrow differentiation. The osteogenic protein can also be used to  
CC repair both bone and cartilage in the treatment of osteoarthritis.  
CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
XX  
SQ Sequence 102 AA;

Query Match 100.0%; Score 111; DB 2; Length 102;  
Best Local Similarity 100.0%; Pred. No. 4.5e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 8  
 AAM36897  
 ID AAM36897 standard; protein; 102 AA.

AC AAM36897;

DT 12-MAR-1998 (first entry)

DE Mutant human osteogenic protein 1 with enhanced solubility.

KM Human osteogenic protein-1; hOP-1; OP-1; morphogen; morphogenic protein;  
 KM tissue-specific morphogenesis; 3-D structure; morphogenic analogue;  
 KM therapeutic agent; diseased tissue regeneration; osteoporosis;  
 KM bone-remodelling disease.

OS Synthetic.  
 OS Homo sapiens.

XX Key Location/Qualifiers

FT Disulfide-bond 1..66  
 /note= "corresponds to residues 38 and 104 of the mature protein"

FT Region 1..30  
 /note= "region designated Finger 1"

FT Misc-difference 26  
 /note= "wild type Ala63 is replaced with Ser"

FT Disulfide-bond 30..99  
 /note= "corresponds to residues 67 and 136 of the mature protein"

FT Disulfide-bond 34..101  
 /note= "corresponds to residues 71 and 138 of the mature protein"

FT Region 34..66  
 /note= "region designated Heel"

FT Region 67..99  
 /note= "region designated Finger 2"

PN WO9726277-A2.

XX 24-JUL-1997.

XX 22-JAN-1997; 97WO-US001071.

XX 22-JAN-1996; 96US-00589552.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX (UYBR-) UNIV BRANDERS.

XX Keck P, Griffith DL, Carlson WD, Rueger DC, Sampath KT;

XX WPI; 1997-385296/35.

XX 24-JUL-1997.

XX Computer system containing crystallographic coordinates of human osteogenic protein-1 - used for design of analogues with agonist activity, potentially useful for treating osteoporosis etc.

XX Disclosure; Page; 176pp; English.

XX The present sequence represents a mutant human osteogenic protein-1 (hOP-1).

XX 1). OP-1 proteins are a group of morphogenetically active proteins.

XX Morphogens are inactive when reduced, but are active as oxidized homodimers and when oxidized with other morphogens. Morphogenic proteins such as OP-1 play an important role, not only in embryogenesis, but also in tissue and organ maintenance and repair in mammals. They induce a developmental cascade of tissue-specific morphogenesis in a mammal. This mutant has had Ala63 replaced with Ser to enhance the solubility of the

CC homodimer. Ala63 was identified as a potential mutation site using a novel computer system. The system comprises a memory containing atomic X-ray crystallographic coordinates defining at least part of hOP-1, and a processor able to generate a molecular model having the three-dimensional shape representative of at least part of hOP-1. Morphogenic analogues with hOP-1 like activity can also be identified using this system. Typical applications of the therapeutic agents identified are in proliferation of progenitor cells and regeneration of damaged or diseased tissue (e.g. osteoporosis or other bone-remodelling diseases) but more generally in any situation where mimicking or agonism of hOP-1 is required. note: this sequence does not appear in the specification; it was created using information provided

XX Sequence 102 AA;

QY Query Match 100.0%; Score 111; DB 2; Length 102;

DB 57 INPETHKPCCAPTOLNAIS 76

QY 1 INPETHKPCCAPTOLNAIS 20

DB 57 INPETHKPCCAPTOLNAIS 76

XX AAM36897 standard; protein; 102 AA.

XX AAM36897;

DT 12-MAR-1998 (first entry)

DE Human osteogenic protein 1, a morphogenic protein.

KM Human osteogenic protein-1; hOP-1; OP-1; morphogen; morphogenic protein;  
 KM tissue-specific morphogenesis; 3-D structure; morphogenic analogue;  
 KM therapeutic agent; diseased tissue regeneration; osteoporosis;  
 KM bone-remodelling disease.

OS Homo sapiens.

XX Key Location/Qualifiers

FT Disulfide-bond 1..66  
 /note= "corresponds to residues 38 and 104 of the mature protein"

FT Region 1..30  
 /note= "region designated Finger 1"

FT Disulfide-bond 30..99  
 /note= "corresponds to residues 67 and 136 of the mature protein"

FT Disulfide-bond 34..101  
 /note= "corresponds to residues 71 and 138 of the mature protein"

FT Region 34..66  
 /note= "region designated Heel"

FT Region 67..99  
 /note= "region designated Finger 2"

PN WO9726277-A2.

XX 24-JUL-1997.

XX 22-JAN-1997; 97WO-US001071.

XX 22-JAN-1996; 96US-00589552.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX (UYBR-) UNIV BRANDERS.

XX Keck P, Griffith DL, Carlson WD, Rueger DC, Sampath KT;

XX WPI; 1997-385296/35.

Computer system containing crystallographic coordinates of human osteogenic protein-1 - useful for design of analogues with agonist activity, potentially useful for treating osteoporosis etc.

Disclosure; Page 72; 176pp; English.

The present sequence is defined as human osteogenic protein-1 (hOP-1) in the specification. OP-1 proteins are a group of morphogenetically active proteins. Morphogens are inactive when reduced, but are active as oxidised homodimers and when oxidised with other morphogens. Morphogenic proteins such as OP-1 play an important role, not only in embryogenesis, but also in tissue and organ maintenance and repair in mammals. They induce a developmental cascade of tissue-specific morphogenesis in a mammal. The 3-dimensional structure of hOP-1 was determined and a novel computer system used to define potential therapeutic agents. The system comprises a memory containing atomic X-ray crystallographic coordinates defining at least part of hOP-1, and a processor able to generate a molecular model having the three-dimensional shape representative of at least part of hOP-1. Morphogenic analogues with hOP-1-like activity can also be identified using this system. The analogues identified have, compared with native OP-1, better stability and/or solubility under physiological conditions, improved tissue target specificity, and reduced clearance rates. Typical applications of the therapeutic agents identified are in proliferation of progenitor cells and regeneration of damaged or diseased tissue (e.g. osteoporosis or other bone-remodelling diseases) but more generally in any situation where mimicking or agonism of hOP-1 is required.

Sequence 102 AA:

Query Match 100.0%; Score 111; DB 2; Length 102;  
Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTOLNAIS 20  
57 INPETHKPCCAPTOLNAIS 76

RESULT 10  
AAW36872  
ID AAW36872 standard; protein, 102 AA.  
XX  
AC AAW36872;  
XX  
DT 25-MAR-2003 (revised)  
DT 10-MAR-1998 (first entry)  
XX  
DE Human osteogenic protein 1 from which a consensus sequence is derived.  
XX  
KW Human osteogenic protein; OP; OP-1; morphogen; morphogenic protein;  
KW embryogenesis; organ maintenance; tissue-specific morphogenesis;  
KW arthritis; emphysema; osteoporosis; cirrhosis.  
XX  
OS Homo sapiens.  
XX  
PN US5650276-A.  
XX  
PD 22-JUL-1997.  
XX  
PF 20-JUL-1994; 94US-00278729.  
XX  
PR 11-MAR-1991; 91US-00667274.  
PR 30-AUG-1991; 91US-00752764.  
PR 30-AUG-1991; 91US-00752861.  
PR 28-AUG-1992; 92US-00938021.  
XX  
PA (CREA-) CREATIVE BIOMOLECULES INC.  
XX Ozkaynak E, Oppermann H, Pang RH, Cohen CM, Kuberasampath T,  
PI Rueger DC, Smart JB,  
XX  
DR WPI; 1997-384665/35.

N-PSDB; AAT97877.

Screening for compounds which modulate morphogen expression - by incubating in the presence of epithelial cells which contain a cellular gene for morphogenic protein expression.

Claim 2; Page; 49pp; English.

The present sequence represents a part of a human osteogenic protein-1 (hOP-1). hOP-1 was first found in bone tissue, and is now known to be produced at relatively high levels in cells derived from renal or adrenal tissue. OP-1 proteins are a group of morphogenetically active proteins. Morphogens are inactive when reduced, but are active as oxidised homodimers and when oxidised with other morphogens (e.g. AAW36854-62). Comparison of the amino acid sequences of human and mouse OP-1 and OP-2 proteins has resulted in a consensus sequence, of which the present sequence is an example. Morphogenic proteins such as OP-1 play an important role, not only in embryogenesis, but also in tissue and organ maintenance and repair in mammals. They induce a developmental cascade of tissue-specific morphogenesis in a mammal. A novel method is described for screening a candidate compound for the ability to modulate expression of a cellular gene encoding a naturally occurring morphogenic protein. The candidate compound is incubated with epithelial cells which express the cellular gene, and after a period of time the epithelial cells are assayed for the presence of or the amount of the protein expressed by the cellular gene. A change in the level of the morphogenic protein relative to the level in the epithelial cells in the absence of the candidate compound is indicative of the ability of the compound to modulate expression of the cellular gene. The method can be used to identify compounds which can increase or decrease morphogen production or levels. Such compounds can be used in the treatment of, e.g. arthritis, emphysema, osteoporosis, kidney disease, lung diseases, cardiomyopathy, and cirrhosis of the liver. note:- the present sequence does not appear in the specification. It was created using information provided. (updated on 25-MAR-2003 to correct PR field.)

Sequence 102 AA:

Query Match 100.0%; Score 111; DB 2; Length 102;  
Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTOLNAIS 20  
57 INPETHKPCCAPTOLNAIS 76

RESULT 11  
AAV16708  
ID AAV16708 standard; peptide, 102 AA.  
XX  
AC AAV16708;  
XX  
DT 17-AUG-1999 (first entry)  
XX  
DE WO9914235 Seq ID No: 161.  
XX  
DE Growth factor; GF; persepabin; neuron growth; cellular degeneration;  
KW peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke;  
KW Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma;  
KW brain injury; spinal cord injury; nervous system tumour; infection;  
KW multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin;  
KW metabolic disease; diabetes; renal dysfunction; neuriturin.  
XX  
OS Unidentified.  
XX  
PN MO9914235-A1.  
XX  
PD 25-MAR-1999.  
XX  
PF 15-SEP-1998; 98WO-US019163.  
XX  
PR 16-SEP-1997; 97US-00931858.

XX (UNIW) UNIV WASHINGTON.  
 XX Johnson EM, Milbrandt JD, Kotzbauer PT, Lampe PA, Klein R;  
 PI Desauvage F;  
 DR WPI: 1999-244023/20.  
 XX New isolated persephein growth factor nucleic acids used to, e.g. promote  
 PT neuronal growth.  
 XX  
 PS Disclosure; Page 181; 222pp; English.  
 XX  
 CC The invention relates to a novel isolated and purified growth factor (GF)  
 CC that comprises persephein or a fragment or a conservatively substituted  
 CC variant. The persephein GF polypeptides can promote the survival and  
 CC growth of neurons and non-neuronal cells. The persephein GF polypeptides  
 CC or polynucleotides can be used for preventing or treating cellular  
 CC degeneration or insufficiency, e.g. neuronal degeneration resulting from  
 CC peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's  
 CC disease, Parkinson's disease, Huntington's disease, ischemic stroke,  
 CC acute brain injury, acute spinal cord injury, nervous system tumors,  
 CC multiple sclerosis, or infection, hematopoietic cell degeneration or  
 CC insufficiency resulting from eosinopenia, anemia, thrombocytopenia, or  
 CC stem-cell insufficiencies, cardiac muscle degeneration or insufficiency  
 CC resulting from cardiomyopathy or congestive heart failure. They can also  
 CC be used for treating e.g. peripheral nerve trauma or injury, exposure to  
 CC neurotoxins, metabolic diseases such as diabetes or renal dysfunctions  
 CC and damage caused by infectious agents. The GF can also be used for  
 CC promoting the growth and/or differentiation of a cell in a culture  
 CC medium. The antisense polynucleotides can be used for treating a disease  
 CC condition mediated by expression of persephein by a population of cells.  
 CC The products can also be used for detection and diagnosis  
 CC  
 XX Sequence 102 AA:  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNALS 20  
 DB 57 INPETHKPCCAPTQNLNALS 76  
 RESULT 12  
 AA89697  
 ID AA89697 standard; peptide; 102 AA.  
 AC  
 XX AA89697;  
 AC  
 XX 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 DT  
 XX  
 DE Human osteogenic protein OP-1 fragment 330-431.  
 XX  
 KW Human; osteogenic protein; OP-1; OPx; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vascularisation; mineralisation;  
 KW bone marrow differentiation.  
 KW  
 XX Homo sapiens.  
 OS  
 XX US5863758-A.  
 EN  
 XX 26-JAN-1999.  
 PD  
 XX 23-MAY-1995; 95US-00449700.  
 PF  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.

PR 17-OCT-1988; 89US-00422659.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00589543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621986.  
 PR 22-FEB-1991; 91US-00680182.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Pang RHL, Rueger DC, Kuberasampath T, Oppertmann H, Ozkaynak E;  
 DR WPI: 1999-131303/11.  
 XX  
 PT Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.  
 PT  
 PS Claim 28; Col 151; 127pp; English.  
 XX  
 CC The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal;  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents a human OP1 fragment. (Updated on 20-MAR-2003  
 CC to correct PA field.)  
 CC  
 XX Sequence 102 AA:  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNALS 20  
 DB 57 INPETHKPCCAPTQNLNALS 76  
 RESULT 13  
 AA895443  
 ID AA895443 standard; protein; 102 AA.  
 AC  
 XX AA895443;  
 AC  
 XX 26-MAR-1999 (first entry)  
 DT  
 XX  
 DE Conserved 7 cysteine skeleton fragment from human OP1.  
 XX  
 KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
 KW polycystic kidney disease; multicystic dysplastic kidney disease;

KW uraemic medullary cystic disease; human.  
XX  
OS Homo sapiens.  
XX  
PN WO9850061-A1.  
XX  
PD 12-NOV-1998.  
XX  
PF 06-MAY-1998; 98MO-US009268.  
XX  
PR 07-MAY-1997; 97US-0045909P.  
XX  
PA (BIOU) BIOGEN INC.  
XX  
PI GJorstrup P, Harris R;  
XX  
DR WPI; 1999-070084/06.  
XX  
PT Treating cystic kidney disease - using renal therapeutic agents or  
PT sequences encoding them, especially from the osteogenic protein/bone  
PT morphogenic protein family.  
XX  
PS Claim 3; Page 5; 67tp; English.  
XX  
CC The invention relates to methods for treating cystic kidney diseases. The  
CC method comprises administering an effective amount of a renal therapeutic  
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
CC with a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OPS, OP7,  
CC OP1-18Ser, OP1-16Ser, OP1-16Val, OP1-16Val, MOPI-PP, MOPI-PP,  
CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat humans  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uraemic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a human osteogenic  
CC protein 1 (OP1) species defining the the conserved 7 cysteine skeleton in  
CC the active region  
XX  
SQ Sequence 102 AA;  
XX  
Query March 100.0%; Score 111; DB 2; Length 102;  
Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76  
XX  
RESULT 14  
AA92569 standard; peptide; 102 AA.  
XX  
AC AA92569;  
XX  
DT 10-AUG-2000 (first entry)  
XX  
DE OP-1 finger-1-heel-finger-2 sequence.  
XX  
KW finger domain; heel region; BMP; TGF-beta family; protein refolding;  
KW fusion protein; osteopetrotic; antibacterial; cytoskeletal.  
XX  
OS Homo sapiens.  
XX  
FH Key  
FH Domain 2..29  
FH /label= finger\_1  
FH Region 35..65  
FH /label= heel  
FH Domain 68..98

PT /label= finger\_2  
XX  
PN WO200020449-A2.  
XX  
PD 13-APR-2000.  
XX  
PF 07-OCT-1999; 99MO-US023372.  
XX  
PR 07-OCT-1998; 98US-0103418P.  
XX  
PR 16-AUG-1999; 99US-00375233.  
XX  
PA (STY) STRYKER CORP.  
XX  
PI Oppermann H, Tai M, McCartney J;  
XX  
DR WPI; 2000-303743/26.  
XX  
PT A biologically active TGF-beta family member fusion protein competent to  
PT refold, comprising a C-terminal linked TGF-beta family protein.  
XX  
PS Disclosure; Page 145-146; 160pp; English.  
XX  
CC AA92554-82 show the finger 1, heel and finger 2 domains of TGF-beta  
CC superfamily members. These sequences can be used to form novel fusion  
CC proteins. Novel proteins comprise biologically active TGF-beta family  
CC member fusion proteins competent to refold under suitable refolding  
CC conditions. The fusion proteins comprise: (1) a TGF-beta family protein C  
CC -terminal seven cysteine domain, comprising finger 1, finger 2 and heel  
CC subdomains; and (2) a heterologous leader sequence domain operatively  
CC linked to the C-terminal domain. Truncations, heterodimers and mutants of  
CC these fusion proteins and methods of purifying the heterodimers are also  
CC claimed. The TGF-beta family proteins can be used to induce the full  
CC cascade of morphogenic events which culminate in skeletal tissue  
CC formation, including cartilage and endochondral bone formation. They are  
CC useful in the binding of fibrin and fibronectin to the implanted matrix,  
CC chondroblasts, cartilage formation, vascular invasion, bone formation,  
CC remodeling, and bone marrow differentiation. The proteins have improved  
CC physical properties such as solubility and stability, improved biological  
CC activity, including altered receptor binding and improved targeting  
CC capabilities  
XX  
SQ Sequence 102 AA;  
XX  
Query March 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76  
XX  
RESULT 15  
AAB09534 standard; protein; 102 AA.  
XX  
ID AAB09534 standard; protein; 102 AA.  
XX  
AC AAB09534;  
XX  
DT 11-SEP-2000 (first entry)  
XX  
DE Human OP-1 C-terminal fragment, SEQ ID NO:55.  
XX  
KW TGF-beta superfamily; transforming growth factor-beta;  
KW developmental regulation; finger 2 subdomain; basic region;  
KW protein refolding; stability; solubility; osteogenic protein; OP;  
KW bone morphogenetic protein; BMP; growth/differentiation factor; GDF;  
KW inhibin; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnerability.  
XX  
OS Homo sapiens.  
XX  
PN WO200020607-A2.

XX 13-APR-2000.  
 PD 07-OCT-1999; 99WO-US023371.  
 PF 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 XX (STYC) STRYKER CORP.  
 PI Oppermann H, Tai M, McCartney J;  
 DR WPI; 2000-303767/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.  
 XX  
 PS Disclosure; Page 147-148; 162pp; English.  
 XX  
 CC The invention relates to mutant TGF-beta (transforming growth factor-  
 CC beta) superfamily members. These mutants comprise one or more amino acid  
 CC substitutions in the base region of the finger 2 subdomain, and a C-  
 CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
 CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
 CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 CC beta superfamily proteins regulate developmental processes and include  
 CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
 CC Specific examples of TGF-beta superfamily mutants encompassed by the  
 CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
 CC 1 (OP-1) (AA09576-B09615). Mutant TGF-beta proteins are used for  
 CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
 CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved, in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AA09519-B09542 and  
 CC AA09553-B09558 represent a variety of wild-type TGF-beta superfamily  
 CC proteins referred to in the specification  
 XX  
 SQ Sequence 102 AA;  
 XX  
 QY  
 DB 1 INPETHKPCCAPTOLNAIS 20  
 57 INPETHKPCCAPTOLNAIS 76  
 XX  
 RESULT 16  
 ID AAB02800 standard; protein; 102 AA.  
 XX  
 AC AAB02800;  
 XX  
 DT 22-AUG-2000 (first entry)  
 XX  
 DE Human OP-1 amino acid sequence SEQ ID NO:55.  
 XX  
 KW Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;  
 KW bone morphogenic protein; osteogenic protein; mutant; modified;  
 KW

KW finger 2 sub-domain; finger 1 domain; heel domain; chimeric protein;  
 KW osteogenic; proliferative; anti-inflammatory; tissue morphogenesis;  
 KW tissue repair; regeneration; proliferation; differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO200020591-A2.  
 XX  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99WO-US023370.  
 XX  
 PR 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374956.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Oppermann H, Tai M, McCartney J;  
 DR WPI; 2000-303766/26.  
 XX  
 PT Novel TGF-beta superfamily mutant chimeric protein, useful for inducing  
 PT tissue morphogenesis in e.g. bone, comprises a dimer consisting of one  
 PT monomer containing domains from two family members.  
 XX  
 PS Disclosure; Page 134-135; 149pp; English.  
 XX  
 CC The present invention describes a tumour growth factor beta (TGF-beta)  
 CC superfamily chimeric protein (I) derived from at least 2 different  
 CC members of the superfamily comprising a dimer with one monomer that  
 CC contains a finger 2 domain derived from a first family member and a  
 CC finger 1 domain and heel domain, both derived from a second family  
 CC member. The monomer further comprises a conserved C-terminal cysteine  
 CC skeleton. (I) has osteogenic, proliferative and anti-inflammatory  
 CC activities. The TGF-beta superfamily chimeric proteins (I) are useful for  
 CC inducing tissue morphogenesis (i.e. molecules capable of tissue repair  
 CC and regeneration and/or inhibiting inflammation) in bone, non-mineralized  
 CC skeletal tissue, dental tissue, connective tissue, brain, liver and nerve  
 CC and for inducing the proliferation and differentiation of uncommitted  
 CC progenitor cells in a tissue-specific manner to support new tissue  
 CC formation. AA02987 to AA02987 to AA02987 to AA02987 to AA02987 to  
 CC sequences used in the exemplification of the present invention  
 XX  
 SQ Sequence 102 AA;  
 XX  
 QY  
 DB 1 INPETHKPCCAPTOLNAIS 20  
 57 INPETHKPCCAPTOLNAIS 76  
 XX  
 RESULT 17  
 ID AAU10599 standard; protein; 102 AA.  
 XX  
 AC AAU10599;  
 XX  
 DT 12-MAR-2002 (first entry)  
 XX  
 DE Human osteogenic protein 1 (hOP-1).  
 XX  
 KW Human, osteogenic protein 1; hOP-1; OP-1; finger region; heel region;  
 KW morphogen; metabolic bone disease; osteopenia; bone; fracture;  
 KW protein coordinate data.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key  
 FT Region  
 FT 1.30  
 FT /note="Finger 1 region"

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FT Region 34. .66
FT /note= "Heel region"
FT Region 67. .99
FT /note= "Finger 2 region"
XX
XX US6273598-B1.
XX
XX 14-AUG-2001.
XX
XX 22-JAN-1997; 97US-00786284.
XX
XX 22-JAN-1996; 96US-00589552.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Keck PC, Griffith DL, Carlson WD, Rueger DC, Sampath KT;
XX WPI; 2001-606375/69.
XX
XX Computer system for producing morphogen analogs, has processor to
XX generate molecular model having three dimensional shape of portion of
XX human osteogenic protein from the finger or heel region.
XX
XX Disclosure; Fig 12; 127pp; English.
XX
XX The invention relates to a memory storing an atomic X-ray
XX crystallographic coordinate, which defines a portion of human osteogenic
XX protein-1 (hOP-1) of the finger or heel region. A processor, generates a
XX molecular model having a three dimensional shape of the portion of human
XX OP-1. This is used for designing, identifying and producing morphogen
XX analogues of hOP-1, for treating mammals with metabolic bone disease such
XX as osteopenia, or for generating morphogen based therapeutics for
XX treating injured or diseased mammalian tissue, such as bone during
XX fracture. This sequence represents human OP-1
XX
XX Sequence 102 AA:
XX
XX Query Match 100.0%; Score 111; DB 4; Length 102;
XX Best Local Similarity 100.0%; Pred. No. 4.5e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTQLNLAIS 20
XX ||||||||||||||||
XX 57 INPETHKPCCAPTQLNLAIS 76
XX
XX RESULT 18
XX ABB76281
XX ID ABB76281 standard; protein; 102 AA.
XX
XX ABB76281;
XX
XX 12-AUG-2002 (first entry)
XX
XX Mature human osteogenic protein-1.
XX
XX Osteogenic protein-1; OP-1; hOP-1; human; morphogen; vulnerary;
XX antiinflammatory; protein co-ordinate data; cyclic.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX Disulfide-bond 1. .67
XX Region 1. .34
XX /label= Finger-1
XX Disulfide-bond 30. .99
XX Region 34. .101
XX /label= Heel
XX 68. .102
XX /label= Finger-2
XX
XX US2002028453-A1.

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XX
XX 07-MAR-2002.
XX
XX 22-FEB-2001; 2001US-00791946.
XX
XX 22-JAN-1996; 96US-00589552.
XX
XX 22-JAN-1997; 97US-00786284.
XX
XX (KECK/) KECK P C.
XX (GRIF/) GRIFFITH D L.
XX (CARL/) CARLSON W D.
XX (RUEG/) RUEGER D C.
XX (SAMP/) SAMPATH K T.
XX
XX Keck PC, Griffith DL, Carlson WD, Rueger DC, Sampath KT;
XX WPI; 2002-414103/44.
XX
XX Producing morphogenic analog having osteogenic protein-1 like biological
XX activity useful for therapeutic purposes, involves use of a portion of
XX atomic co-ordinates defining three-dimensional structure of the protein.
XX
XX Disclosure; Page 26; 128pp; English.
XX
XX The present sequence is the protein sequence of human mature osteogenic
XX protein-1 (hOP-1), including the finger-1, heel and finger-2 regions. The
XX present invention is based on the X-ray crystallographic determination of
XX the 3-dimensional structure of mature, dimeric hOP-1. The 3-dimensional
XX structure of hOP-1 has been resolved to 2.3 Angstroms. 2 sets of atomic X
XX -ray crystallographic co-ordinates for hOP-1 are provided, the first
XX defining an hOP-1 structure resolved to a resolution of 2.8 Angstroms and
XX the other to a resolution of 2.3 Angstroms. These sets of atomic co-
XX ordinates can be used in the computer aided design of protein or peptide
XX analogues of OP-1, or to identify or design small organic molecules that
XX functionally mimic OP-1. The engineering of hOP-1 dimers to improve
XX stability, enhance water solubility, or to add or remove glycosylation
XX sites, is envisaged. A compound that modulates OP-1 activity is useful
XX for repairing diseased or damaged mammalian tissue, and for preventing or
XX inhibiting immune/inflammatory response-mediated tissue damage or scar
XX tissue formation following injury
XX
XX Sequence 102 AA:
XX
XX Query Match 100.0%; Score 111; DB 5; Length 102;
XX Best Local Similarity 100.0%; Pred. No. 4.5e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTQLNLAIS 20
XX ||||||||||||||||
XX 57 INPETHKPCCAPTQLNLAIS 76
XX
XX RESULT 19
XX ADG14142
XX ID ADG14142 standard; protein; 102 AA.
XX
XX ADG14142;
XX
XX 26-FEB-2004 (first entry)
XX
XX Human osteogenic protein, OP-1.
XX
XX Human; osteogenic protein-1; OP-1; transforming growth factor beta;
XX TGFbeta; bone morphogenic protein; BMP5; BMP6; BMP2; BMP4; BMP8/OP2;
XX Growth Differentiation Factor; GDF5; GDF6; GDF7; cell growth;
XX cell differentiation; cell proliferation.
XX
XX Homo sapiens.
XX
XX US2003185792-A1.
XX
XX 02-OCT-2003.

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PF 06-JUN-2002; 2002US-00164279.  
 XX  
 PR 22-JAN-1996; 96US-00589552.  
 PR 22-JAN-1997; 97US-00786284.  
 PR 22-FEB-2001; 2001US-00791946.  
 PR 06-JUN-2001; 2001US-0296291P.  
 PR 05-FEB-2002; 2002US-0354820P.  
 PR 10-APR-2002; 2002US-0371298P.  
 XX  
 PA (CIRI-) CURIS INC.  
 XX  
 PI Keck PC, Bosukonda D;  
 XX  
 DR WPI; 2004-031977/03.  
 XX  
 PT Bone morphogenic protein antagonist peptide comprises peptide sequence  
 PT having specified amino acid residues including contiguous amino acids of  
 PT specific amino acid sequences given in the specifications.  
 XX  
 PS Disclosure; SEQ ID NO 4; 88pp; English.  
 XX  
 CC The invention relates to a bone morphogenic protein (BMP) antagonist  
 CC peptide comprising a peptide sequence having 6-50 amino acid residues  
 CC based on or chosen from the finger 1, heel or finger 2 regions of the  
 CC TGF-beta (transforming growth factor beta) family proteins osteogenic  
 CC protein-1 (OP-1), BMP5, BMP6, BMP2, BMP4, BMP8/OP2, GDF5 (growth  
 CC differentiation factor), GDF6 and GDF7. Also included are a peptide that  
 CC brings together a type (I) and type (II) receptor (comprising a first  
 CC three contiguous amino acids of the protein regions detailed above and a  
 CC second peptide sequence having a cysteine residue on each end and  
 CC including at least three contiguous amino acids of 1-34 amino acids of 10  
 CC different amino acid sequences given in the specifications), a nucleic  
 CC acid sequence encoding the above peptide, a pharmaceutical preparation  
 CC comprising a sterile excipient and the above peptide, a peptidomimetic of  
 CC the peptide and inhibiting or promoting growth, differentiation, or  
 CC proliferation of a cell by contacting the cell with the above peptide.  
 CC The antagonist peptides are used to antagonise bone morphogenic protein-  
 CC like biological activity, preferably osteogenic protein-1 activity. The  
 CC inventive peptide mimics or enhances the physiological effects of a  
 CC morphogenic protein, such as osteogenic protein-1 (OP-1). The present  
 CC sequence is a BMP-like protein used to design the peptides of the  
 CC invention.  
 CC  
 SQ Sequence 102 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 8; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHKPCCAPQLNAIS 20  
 DB 57 INPETHKPCCAPQLNAIS 76  
 XX  
 RESULT 20  
 ADO36196  
 ID ADO36196 standard; protein; 102 AA.  
 XX  
 AC ADO36196;  
 XX  
 DT 29-JUN-2004 (first entry)  
 XX  
 DE Transformation and differentiation factor-1 fragment #1.  
 XX  
 KW memory stores atomic X-ray crystallographic coordinate; human;  
 KW transformation and differentiation factor-1; TDF-1;  
 KW morphogen analogue production; tissue morphogenic protein;  
 KW tissue morphogenic protein mimetic; solubility; stability;  
 KW protein co-ordinate data.  
 XX  
 OS Homo sapiens.  
 XX

PN US2004093164-A1.  
 XX  
 PD 13-MAY-2004.  
 XX  
 PF 08-NOV-2002; 2002US-00290554.  
 XX  
 PR 08-NOV-2002; 2002US-00290554.  
 XX  
 PA (CARL/) CARLSON W D.  
 PA (KECK/) KECK P C.  
 XX  
 PI Carlson WD, Keck PC;  
 XX  
 DR WPI; 2004-439217/41.  
 XX  
 PT Computer system for producing tissue morphogenic protein analogs, has  
 PT memory to store atomic X-ray crystallographic coordinates defining  
 PT portion of human transformation and differentiation factor-1 (hTDF-1).  
 XX  
 PS Disclosure; Fig 3; 82pp; English.  
 XX  
 CC The invention describes memory stores atomic X-ray crystallographic  
 CC coordinates defining a portion of human transformation and  
 CC differentiation factor-1 (hTDF-1). A processor communicates with the  
 CC memory to generate a molecular model having a three-dimensional shape  
 CC representing portion of hTDF-1. Also described is a morphogen analogue  
 CC production method. The system is useful for designing, identifying and  
 CC producing molecules which act as functional mimetics of tissue  
 CC morphogenic protein, TDF-1. The molecule is designed with enhanced  
 CC solubility and stability under physiological condition. Also the  
 CC biological activity of the hTDF-1 in mammal is enhanced. This is the  
 CC amino acid sequence of a C-terminal fragment of human transformation  
 CC differentiation factor-1 (TDF-1) comprising the finger-1, heel and finger  
 CC -2 regions, used in a comparison with another tissue morphogen protein,  
 CC transforming growth factor beta 2 (TGF-beta2).  
 XX  
 SQ Sequence 102 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 8; Length 102;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHKPCCAPQLNAIS 20  
 DB 57 INPETHKPCCAPQLNAIS 76.  
 XX  
 RESULT 21  
 AA92027  
 ID AA92027 standard; protein; 111 AA.  
 XX  
 AC AA92027;  
 XX  
 DT 19-JUN-2000 (first entry)  
 XX  
 DE Human bone morphogenic protein-7, osteogenic protein-1 factor monomer.  
 XX  
 KW human bone morphogenic protein-6; BMP-6; osteogenic protein-1 factor;  
 KW CKGF; mutant; cysteine knot growth factor; hairpin loop; infertility.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FH Misc-difference 1..20  
 FT /note= "optionally mutated to increase electrostatic  
 FT interaction between beta hairpin structure and a  
 FT receptor"  
 FT Domain 21..40  
 FT /label= beta\_hairpin\_loop\_1  
 FT /note= "mutant optionally comprises one or more  
 FT substitutions in these residues"  
 FT Misc-difference 41..80  
 FT /note= "optionally mutated to increase electrostatic



FT interaction between beta hairpin structure and a  
 FT receptor  
 FT Domain  
 FT 81..102  
 FT /label= beta\_hairpin\_loop\_3  
 FT /note= "mutant optionally comprises one or more  
 FT substitutions in these residues"  
 FT Misc-difference 103..111  
 FT /note= "optionally mutated to increase electrostatic  
 FT interaction between beta hairpin structure and a  
 FT receptor"  
 FT  
 FT WO200017360-A1.  
 FT  
 FT 30-MAR-2000.  
 FT  
 FT 19-MAR-1999; 99WO-US005908.  
 FT  
 FT 22-SEP-1998; 98WO-US019772.  
 FT  
 FT (UYMA-) UNIV MARYLAND BALTIMORE.  
 FT  
 FT Weintraub BD, Skudlinski MW.  
 FT  
 FT WPI; 2000-283585/24.  
 FT  
 FT New mutant cystine knot growth factor proteins comprising one or more  
 FT mutant subunits, useful for treating or preventing diseases e.g.  
 FT hypothyroidism and thyroid cancer.  
 FT  
 FT Claim 447; Page 309; 320pp; English.  
 FT  
 FT This is wild type human bone morphogenic protein-7 (osteogenic protein-1  
 FT factor monomer). Mutants comprise at least one electrostatic charge  
 FT altering mutation in a beta hairpin loop, resulting in increased  
 FT bioactivity. Mutant cystine knot growth factor (CKGF) proteins comprising  
 FT one or more mutant subunits and having novel properties or improved  
 FT pharmacological properties, compared to wild type CKGFs, are claimed. The  
 FT CKGF superfamily comprises at least four families of growth factors: the  
 FT glycoprotein hormones, the platelet-derived growth factor (PDGF) family,  
 FT the neurotrophins and the transforming growth factor-beta family; the  
 FT families are known to be structurally similar (especially comprising the  
 FT cystine knot topology) and it was shown that mutations at certain  
 FT positions in the CKGF hairpin loops of family members and other members  
 FT of the CKGF superfamily could significantly alter the biological  
 FT activities of the CKGF. Mutant transforming growth factor family proteins  
 FT or analogues are useful for treatment of ovulatory dysfunction, luteal  
 FT phase defect, unexplained infertility, time-limited conception and in  
 FT assisted reproduction  
 FT  
 FT Sequence 111 AA;  
 FT  
 FT Query Match 100.0%; Score 111; DB 3; Length 111;  
 FT Best Local Similarity 100.0%; Pred. No. 4.9e-07;  
 FT Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 FT  
 FT 1 INPETHKPCCAPTQLNAIS 20  
 FT | | | | | | | | | | | | | | | | | | | | | |  
 FT Db 67 INPETHKPCCAPTQLNAIS 86  
 FT  
 FT RESULT 22  
 FT AAR53361  
 FT ID AAR53361 standard; protein; 114 AA.  
 FT  
 FT AAR53361;  
 FT  
 FT 25-MAR-2003 (revised)  
 FT 01-JUL-2002 (revised)  
 FT 06-JUN-1994 (first entry)  
 FT  
 FT N-terminally truncated osteogenic protein OPl (OPl-16Val).  
 FT  
 FT Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;

KW vascularisation; mineralisation; differentiation.  
 XX  
 XX Homo sapiens.  
 OS  
 XX US5266683-A.  
 XX  
 XX 30-NOV-1993.  
 PD  
 XX  
 XX 21-FEB-1992; 92US-00841646.  
 PF  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 XX 15-AUG-1988; 88US-00232630.  
 XX 23-FEB-1989; 89US-00315342.  
 XX 17-OCT-1989; 89US-00422613.  
 XX 17-OCT-1989; 89US-00422699.  
 XX 22-FEB-1990; 90US-00483913.  
 XX 20-AUG-1990; 90US-00569920.  
 XX 07-SEP-1990; 90US-00579865.  
 XX 18-OCT-1990; 90US-00599543.  
 XX 18-OCT-1990; 90US-00600024.  
 XX 21-NOV-1990; 90US-00616374.  
 XX 04-DEC-1990; 90US-00621849.  
 XX 22-FEB-1991; 91US-00650162.  
 XX 20-DEC-1991; 91US-00810560.  
 XX 28-JAN-1992; 92US-00827052.  
 XX  
 XX (STYC ) STRYKER CORP.  
 XX  
 XX Kuberassampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 XX WPI; 1993-395405/49.  
 XX DR N-PSDB; AAQ53141.  
 XX  
 XX New pure mammalian osteogenic proteins - induce cartilage and  
 XX endochondral bone formation when in association with a matrix.  
 XX  
 XX Claim 8; Col 69-72; 125pp; English.  
 XX  
 XX This sequence is a fragment of the osteogenic protein OPl and is  
 XX designated OPl-16Val. The osteogenic protein when in association with a  
 XX matrix can induce at the locus of an implant the full development cascade  
 XX of endochondral bone formation including vascularisation, mineralisation  
 XX and bone marrow differentiation. The osteogenic protein can also be used  
 XX to repair both bone and cartilage in the treatment of osteoarthritis.  
 XX (Updated on 01-JUN-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 XX to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
 XX  
 XX Sequence 114 AA;  
 XX  
 XX Query Match 100.0%; Score 111; DB 2; Length 114;  
 XX Best Local Similarity 100.0%; Pred. No. 5.1e-07;  
 XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 XX  
 XX 1 INPETHKPCCAPTQLNAIS 20  
 XX | | | | | | | | | | | | | | | | | | | | | |  
 XX Db 69 INPETHKPCCAPTQLNAIS 88  
 XX  
 XX RESULT 23  
 XX AAW95454  
 XX ID AAW95454 standard; protein; 114 AA.  
 XX  
 XX AAW95454;  
 XX  
 XX 26-MAR-1999 (first entry)  
 XX  
 XX N-terminally truncated mature human OPl, OPl-16Val (residues 318-431).  
 XX  
 XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 XX bone morphogenic protein; BMP; growth factor-beta superfamily;  
 XX polycystic kidney disease; multicystic dysplastic kidney disease;  
 XX tubercular medullary cystic disease; human; OPl; truncated.

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XX OS Homo sapiens.
XX XX WO9850061-A1.
XX PN 12-NOV-1998.
XX PD 06-MAY-1998; 98WO-US009268.
XX PF 07-MAY-1997; 97US-0045909P.
XX PR (BIOJ ) BIOGEN INC.
XX PA GJorstrup P, Harris R;
XX PI WPI, 1999-070084/06.
XX DR
XX XX Treating cystic kidney disease - using renal therapeutic agents or
XX PT sequences encoding them, especially from the osteogenic protein/bone
XX PR morphogenic protein family.
XX PS Claim 4; Page: 67pp; English.
XX CC The invention relates to methods for treating cystic kidney diseases. The
XX CC method comprises administering an effective amount of a renal therapeutic
XX CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic
XX CC agent is preferably a soluble or membrane bound polypeptide, e.g. a
XX CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family
XX CC within a transforming growth factor-beta superfamily of proteins. It is
XX CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OP1, OP1-
XX CC OP1-16Ser, OP1-16Leu, OP1-16Met, OP1-16Ala, OP1-16Val, MOPI, MOPI-PP,
XX CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their
XX CC biologically active homologues. The method is used to treat humans
XX CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive
XX CC (infantile) polycystic disease, multicystic dysplastic kidney disease,
XX CC uremic medullary cystic disease, and autosomal dominant polycystic
XX CC kidney disease. The present sequence represents a N-terminally truncated
XX CC mature human osteogenic protein 1 (OP1) that can be used as a therapeutic
XX CC agent in the method of the invention. Note: This sequence is not provided
XX CC in the specification. It has been derived from the human OP1 sequence
XX CC (AAW95448) obtained from U.S. Patent No. 5,266,683
XX SQ
XX Query Match 100.0%; Score 111; DB 2; Length 114;
XX Best Local Similarity 100.0%; Pred. No. 5.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHPRCCAPTOLNAIS 20
DB 69 INPETHPRCCAPTOLNAIS 88

```

RESULT 24  
AAR53362  
ID AAR53362 standard; protein, 116 AA.  
XX AC AAR53362;  
XX XX  
XX DT 25-MAR-2003 (revised)  
XX DT 01-JUL-2002 (revised)  
XX DT 06-JUN-1994 (first entry)  
XX DE N-terminally truncated osteogenic protein OP1 (OP1-16Ala).  
XX KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
XX KW vascularisation; mineralisation; differentiation.  
XX OS Homo sapiens.  
XX OS US5266683-A.  
XX PN 30-NOV-1993.

```

XX XX 21-FEB-1992; 92US-00841646.
XX PF 08-APR-1988; 88US-00179406.
XX PR 15-AUG-1988; 88US-00232630.
XX PR 23-FEB-1989; 89US-00315342.
XX PR 17-OCT-1989; 89US-00422613.
XX PR 17-OCT-1989; 89US-00422699.
XX PR 22-FEB-1990; 90US-00483913.
XX PR 20-AUG-1990; 90US-00569920.
XX PR 07-SEP-1990; 90US-00579865.
XX PR 18-OCT-1990; 90US-00599543.
XX PR 18-OCT-1990; 90US-00600024.
XX PR 21-NOV-1990; 90US-00616374.
XX PR 04-DEC-1990; 90US-00621849.
XX PR 22-FEB-1991; 91US-00660162.
XX PR 20-DEC-1991; 91US-00810550.
XX PR 28-JAN-1992; 92US-00827052.
XX PA (STYC ) STRYKER CORP.
XX XX
XX PI Kuberzaspeth T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;
XX DR WPI, 1993-395405/49.
XX DR N-PSDB; AAQ53141.
XX PT New pure mammalian osteogenic proteins - induce cartilage and
XX PR endochondral bone formation when in association with a matrix.
XX PS Claim 9; Col 69-72; 128pp; English.
XX XX
XX CC This sequence is a fragment of the osteogenic protein OP1 and is
XX CC designated OP1-16Ala. The osteogenic protein when in association with a
XX CC matrix can induce at the locus of an implant the full development cascade
XX CC of endochondral bone formation including vascularisation, mineralisation
XX CC and bone marrow differentiation. The osteogenic protein can also be used
XX CC to repair both bone and cartilage in the treatment of osteoarthritis.
XX CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003
XX CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)
XX SQ
XX Query Match 100.0%; Score 111; DB 2; Length 116;
XX Best Local Similarity 100.0%; Pred. No. 5.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHPRCCAPTOLNAIS 20
DB 71 INPETHPRCCAPTOLNAIS 90

```

RESULT 25  
AAW95453  
ID AAW95453 standard; protein, 116 AA.  
XX AC AAW95453;  
XX XX  
XX DT 26-MAR-1999 (first entry)  
XX DE N-terminally truncated mature human OP1, OP1-16Ala (residues 316-431).  
XX KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
XX KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
XX KW polycystic kidney disease; multicystic dysplastic kidney disease;  
XX KW uremic medullary cystic disease; human; OP1; truncated.  
XX OS Homo sapiens.  
XX OS WO9850061-A1.  
XX PN 12-NOV-1998.

PF 06-MAY-1998; 98WO-US009268.  
 XX 07-MAY-1997; 97US-0045909P.  
 XX (BIOJ ) BIOGEN INC.  
 PA Gjoerstrup P, Harris R;  
 XX WPI; 1999-070084/06.  
 DR WPI; 1999-070084/06.  
 XX Treating cystic kidney disease - using renal therapeutic agents or  
 PT sequences encoding them, especially from the osteogenic protein/bone  
 PT morphogenic protein family.  
 XX  
 XX Claim 4; Page: 67pp; English.  
 PS  
 XX The invention relates to methods for treating cystic kidney diseases. The  
 CC method comprises administering an effective amount of a renal therapeutic  
 CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
 CC agent is preferably a soluble or membrane bound polypeptide, e.g. a family  
 CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
 CC within a transforming growth factor-beta superfamily of proteins. It is  
 CC especially one of the polypeptides hOP1, hOP1-PP, OP1-16Ser, OP1, OP7,  
 CC OP1-16Ser, OP1-16Met, OP1-16Met, OP1-16Ala, OP1-16Val, hOP1-PP,  
 CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
 CC biologically active homologues. The method is used to treat humans  
 CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
 CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
 CC uremic medullary cystic disease, and autosomal dominant polycystic  
 CC kidney disease. The present sequence represents a N-terminally truncated  
 CC mature human osteogenic protein 1 (OP1) that can be used as a therapeutic  
 CC agent in the method of the invention. Note: This sequence is not provided  
 CC in the specification. It has been derived from the human OP1 sequence  
 CC (AAW93448) obtained from U.S. Patent No. 5,266,683  
 CC  
 XX Sequence 116 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 116;  
 Best Local Similarity 100.0%; Pred. No. 5.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNMAIS 20  
 DB 71 INPETHKPCCAPTQLNMAIS 90  
 RESULT 26  
 AAR53363  
 ID AAR53363 standard; protein; 117 AA.  
 XX  
 AC AAR53363;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 06-JUN-1994 (first entry)  
 XX  
 XX N-terminally truncated osteogenic protein OP1 (OP1-16Met).  
 XX  
 KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 KW vascularisation; mineralisation; differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US5266683-A.  
 XX  
 PD 30-NOV-1993.  
 XX  
 PF 21-FEB-1997; 92US-00841646.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 XX 15-AUG-1988; 88US-00232630.  
 XX 23-FEB-1989; 89US-00315342.  
 XX 17-OCT-1989; 89US-00422613.

PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 XX  
 XX (STYC ) STRYKER CORP.  
 PA  
 PI Kuberassampath T, Ozkaynak E, Rueger DC, Fang RHL, Oppermann H;  
 XX WPI; 1993-395405/49.  
 DR N-PSDB; AAO53141.  
 DR  
 XX New pure mammalian osteogenic proteins - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.  
 XX  
 PS Claim 10; Col 69-72; 128pp; English.  
 XX  
 CC This sequence is a fragment of the osteogenic protein OP1 and is  
 CC designated OP1-16Met. The osteogenic protein when in association with a  
 CC matrix can induce at the locus of an implant the full development cascade  
 CC of endochondral bone formation including vascularisation, mineralisation  
 CC and bone marrow differentiation. The osteogenic protein can also be used  
 CC to repair both bone and cartilage in the treatment of osteoarthritis.  
 CC (Updated on 01-JUN-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
 CC  
 XX Sequence 117 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 117;  
 Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQLNMAIS 20  
 DB 72 INPETHKPCCAPTQLNMAIS 91  
 RESULT 27  
 AAW95452  
 ID AAW95452 standard; protein; 117 AA.  
 XX  
 AC AAW95452;  
 XX  
 DT 25-MAR-1999 (first entry)  
 XX  
 DE N-terminally truncated mature human OP1, OP1-16Met (residues 315-431).  
 XX  
 KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
 KW polycystic kidney disease; multicystic dysplastic kidney disease;  
 KW uremic medullary cystic disease; human; OP1; truncated.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO9850061-A1.  
 XX  
 PD 12-NOV-1998.  
 XX  
 PF 06-MAY-1998; 98WO-US009268.  
 XX  
 PR 07-MAY-1997; 97US-0045909P.  
 XX  
 XX (BIOJ ) BIOGEN INC.  
 PA Gjoerstrup P, Harris R;  
 XX

XX DR WPI; 1999-070084/06.  
XX PT Treating cystic kidney disease - using renal therapeutic agents or  
PT sequences encoding them, especially from the osteogenic protein/bone  
PT morphogenic protein family.  
XX PS  
PS Claim 4; Page; 67pp; English.  
CC The invention relates to methods for treating cystic kidney diseases. The  
CC method comprises administering an effective amount of a renal therapeutic  
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
CC within a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OP1-16Ser, OP5, OP7,  
CC OP1-16Ser, OP1-16Leu, OP1-16Met, OP1-16Ala, OP1-16Val, hOP1, hOP1-PP,  
CC hOP2, hOP2-PP, hOP2-1Aa, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat human  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uremic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a N-terminally truncated  
CC mature human osteogenic protein 1 (OP1) that can be used as a therapeutic  
CC agent in the method of the invention. Note: This sequence is not provided  
CC in the specification. It has been derived from the human OP1 sequence  
CC (AAW95448) obtained from U.S. Patent No. 5,266,683  
XX SQ  
SQ Sequence 117 AA;  
Query Match 100.0%; Score 111; DB 2; Length 117;  
Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHPPKCCAPTQLNLAIS 20  
DB 72 INPETHPPKCCAPTQLNLAIS 91  
RESULT 28  
AAW92595  
ID AAW92595 standard; protein; 117 AA.  
XX AC AAW92595;  
XX DT 10-AUG-2000 (first entry)  
XX DE Trypsin truncated H2223 mutant OP-1.  
XX KW finger 2 subdomain; BMP; TGF-beta family; protein refolding; OP-1;  
XX fusion protein; osteopathic; antibacterial; cytoslatic; mutant.  
XX OS Homo sapiens.  
XX PN WO2000020449-A2.  
XX PD 13-APR-2000.  
XX PF 07-OCT-1999; 99WO-US023372.  
XX PR 07-OCT-1998; 98US-0103418P.  
XX PR 16-AUG-1999; 99US-00375333.  
XX PA (STYC ) STRYKER CORP.  
XX PI Oppermann H, Tai M, McCartney J;  
XX DR WPI; 2000-303743/26.  
XX PT A biologically active TGF-beta family member fusion protein competent to  
PT refold, comprising a C-terminal linked TGF-beta family protein.  
XX PS Claim 16; Page 153-154; 160pp; English.

XX CC This is a trypsin truncated mutant H2223 OP-1 construct. Novel proteins  
CC comprise biologically active TGF-beta family member fusion proteins  
CC competent to refold under suitable refolding conditions. The fusion  
CC proteins comprise: (1) a TGF-beta family protein C-terminal seven  
CC cysteine domain, comprising finger 1, finger 2 and heel subdomains; and  
CC (2) a heterologous leader sequence domain operatively linked to the C-  
CC terminal domain. Truncations, heterodimers and mutants of these fusion  
CC proteins and methods of purifying the heterodimers are also claimed. The  
CC TGF-beta family proteins can be used to induce the full cascade of  
CC morphogenic events which culminate in skeletal tissue formation,  
CC including cartilage and endochondral bone formation. They are useful in  
CC the binding of fibrin and fibronectin to the implanted matrix, chemotaxis  
CC of cells, proliferation of fibroblasts, differentiation into  
CC chondroblasts, cartilage formation, vascular invasion, bone formation,  
CC remodeling, and bone marrow differentiation. The proteins have improved  
CC physical properties such as solubility and stability, improved biological  
CC activity, including altered receptor binding and improved targeting  
CC capabilities  
XX SQ  
SQ Sequence 117 AA;  
Query Match 100.0%; Score 111; DB 3; Length 117;  
Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHPPKCCAPTQLNLAIS 20  
DB 72 INPETHPPKCCAPTQLNLAIS 91  
RESULT 29  
AAB09548  
ID AAB09548 standard; protein; 117 AA.  
XX AC AAB09548;  
XX DT 11-SEP-2000 (first entry)  
XX DE Trypsin truncated OP-1 mutant protein H2223, SEQ ID NO:69.  
XX KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnery; mutant; mutlein.  
XX OS Homo sapiens.  
XX OS Synthetic.  
XX PN WO2000020607-A2.  
XX PD 13-APR-2000.  
XX PF 07-OCT-1999; 99WO-US023371.  
XX PR 07-OCT-1998; 98US-0103418P.  
XX PR 16-AUG-1999; 99US-00374958.  
XX PA (STYC ) STRYKER CORP.  
XX PI Oppermann H, Tai M, McCartney J;  
XX DR WPI; 2000-303787/26.  
XX PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX PS Claim 51; Page 155-156; 162pp; English.  
XX CC The invention relates to mutant TGF-beta (transforming growth factor-

CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys) or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (Ops), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralised skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralised skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1)

XX  
SQ Sequence 117 AA;  
Query Match 100.0%; Score 111; DB 3; Length 117;  
Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 72 INPETHKPCCAPTOLNAIS 91

RESULT 30  
AAB02814  
ID AAB02814 standard; protein; 117 AA.  
XX  
AC AAB02814;  
XX  
XX 22-AUG-2000 (first entry)  
DT  
XX  
XX Human trypsin truncated H2223 mutant amino acid sequence SEQ ID NO:69.  
DE  
XX  
XX Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;  
KM bone morphogenic protein; osteogenic protein; mutant; modified;  
KM finger 2 sub-domain; finger 1 domain; heel domain; chimeric protein;  
KM osteogenic; proliferative; antiinflammatory; tissue morphogenesis;  
KM tissue repair; regeneration; proliferation; differentiation.

XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
OS  
XX WO200020591-A2.  
XX  
XX 13-APR-2000.  
PD  
XX  
XX 07-OCT-1999; 99WO-US023370.  
XX  
XX 07-OCT-1998; 98US-010341BP.  
PR  
XX 16-AUG-1999; 99US-00374936.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Opfermann H, Tai M, McCartney J;  
XX  
XX WPI; 2000-303776/26.

PT Novel TGF-beta superfamily mutant chimeric protein, useful for inducing  
PT tissue morphogenesis in e.g. bone, comprises a dimer consisting of one  
PT monomer containing domains from two family members.

XX  
XX  
XX Disclosure; Page 142-143; 149pp; English.

XX  
XX The present invention describes a tumour growth factor beta (TGF-beta)  
CC superfamily chimeric protein (I) derived from at least 2 different  
CC members of the superfamily comprising a dimer with one monomer that  
CC contains a finger 2 domain derived from a first family member and a  
CC finger 1 domain and heel domain, both derived from a second family  
CC member. The monomer further comprises a conserved C-terminal cysteine  
CC skeleton. (I) has osteogenic, proliferative and antiinflammatory  
CC activities. The TGF-beta superfamily chimeric proteins (I) are useful for  
CC inducing tissue morphogenesis (i.e. molecules capable of tissue repair  
CC and regeneration and/or inhibiting inflammation) in bone, non-mineralised  
CC skeletal tissue, dental tissue, connective tissue, brain, liver and nerve  
CC and for inducing the proliferation and differentiation of uncommitted  
CC progenitor cells in a tissue-specific manner to support new tissue  
CC formation. AAB29887 to AAB29897 and AAB02748 to AAB02824 represent  
CC sequences used in the exemplification of the present invention

XX  
SQ Sequence 117 AA;  
Query Match 100.0%; Score 111; DB 3; Length 117;  
Best Local Similarity 100.0%; Pred. No. 5.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 72 INPETHKPCCAPTOLNAIS 91

RESULT 31  
AAB53364  
ID AAB53364 standard; protein; 119 AA.  
XX  
XX AAB53364;  
XX  
XX 25-MAR-2003 (revised)  
DT  
XX 01-JUL-2002 (revised)  
DT  
XX 06-JUN-1994 (first entry)  
DT  
XX  
XX N-terminally truncated osteogenic protein OP1 (OP1-16leu).  
DE  
XX  
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
KM vascularisation; mineralisation; differentiation.

XX  
XX Homo sapiens.  
OS  
OS  
XX US5266683-A.  
XX  
XX 30-NOV-1993.  
PD  
XX  
XX 21-FEB-1992; 92US-00841646.  
XX  
XX  
XX 09-APR-1988; 88US-00179406.  
PR  
XX 15-AUG-1988; 88US-00232630.  
PR  
XX 23-FEB-1989; 89US-00315342.  
PR  
XX 17-OCT-1989; 89US-00422613.  
PR  
XX 17-OCT-1989; 89US-00422699.  
PR  
XX 22-FEB-1990; 90US-00483913.  
PR  
XX 20-APR-1990; 90US-00568920.  
PR  
XX 07-SEP-1990; 90US-00579865.  
PR  
XX 18-OCT-1990; 90US-00599543.  
PR  
XX 18-OCT-1990; 90US-00600024.  
PR  
XX 21-NOV-1990; 90US-00616374.  
PR  
XX 04-DEC-1990; 90US-00621849.  
PR  
XX 04-DEC-1990; 90US-00621988.  
PR  
XX 22-FEB-1991; 91US-00660162.  
PR  
XX 20-DEC-1991; 91US-00810560.  
PR  
XX 28-JAN-1992; 92US-00827052.

PA (STYC) STRYKER CORP.  
PI Kuberanampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
XX WPI; 1993-395405/49.  
DR N-PSDB; AA053141.  
XX  
PT New pure mammalian osteogenic proteins - induce cartilage and  
PT endochondral bone formation when in association with a matrix.  
XX  
PS Claim 11; Col 69-72; 128pp; English.  
XX  
CC This sequence is a fragment of the osteogenic protein OPI and is  
CC designated OPI-16Leu. The osteogenic protein when in association with a  
CC matrix can induce at the locus of an implant the full development cascade  
CC of endochondral bone formation including vascularisation, mineralisation  
CC and bone marrow differentiation. The osteogenic protein can also be used  
CC to repair both bone and cartilage in the treatment of osteoarthritis.  
CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
CC to correct PR field.) (Updated on 25-MAR-2003 to correct PR field.)  
SQ  
SQ Sequence 119 AA;  
Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 5.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTQLNLAIS 20  
Db 74 INPETHKPCCAPTQLNLAIS 93  
RESULT 32  
AAW95451  
ID AAW95451 standard; protein; 119 AA.  
XX  
AC AAW95451;  
XX  
DT 26-MAR-1999 (first entry)  
XX  
DE N-terminally truncated mature human OPI, OPI-16Leu (residues 300-431).  
XX  
KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
KW polycystic kidney disease; multicystic dysplastic kidney disease;  
KW uraemic medullary cystic disease; human; OPI; truncated.  
XX  
OS Homo sapiens.  
XX  
PN WO9850061-A1.  
XX  
PD 12-NOV-1998.  
XX  
PF 06-MAY-1998; 98WC-US0009268.  
XX  
PR 07-MAY-1997; 97US-0045909P.  
XX  
PA (BIOJ) BIOGEN INC.  
XX  
PI Gjoerstrup P, Harris R;  
XX  
DR WPI; 1999-070084/06.  
XX  
PT Treating cystic kidney disease - using renal therapeutic agents or  
PT sequences encoding them, especially from the osteogenic protein/bone  
PT morphogenic protein family.  
XX  
PS Claim 4; Page; 67pp; English.  
XX  
CC The invention relates to methods for treating cystic kidney diseases. The  
CC method comprises administering an effective amount of a renal therapeutic  
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a

CC member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
CC within a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OPI-18Ser, OPS, OP7,  
CC OPI-16Ser, OPI-16Leu, OPI-16Met, OPI-16Ala, OPI-16Val, mOPI, mOPI-PP,  
CC hOP2, hOP2-PP, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat humans  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uraemic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a N-terminally truncated  
CC mature human osteogenic protein 1 (OPI) that can be used as a therapeutic  
CC agent in the method of the invention. Note: This sequence is not provided  
CC in the specification. It has been derived from the human OPI sequence  
CC (AAW95448) obtained from U.S. Patent No. 5,266,683  
SQ  
SQ Sequence 119 AA;  
Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 5.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTQLNLAIS 20  
Db 74 INPETHKPCCAPTQLNLAIS 93  
RESULT 33  
ABG76026  
ID ABG76026 standard; protein; 119 AA.  
XX  
AC ABG76026;  
XX  
DT 30-APR-2003 (first entry)  
XX  
DE Human OP-1 C-terminus.  
XX  
KW GDF-5; growth differentiation factor 5; TGF-beta; human; OP-1;  
KW transforming growth factor beta; skeletal development; endometriosis;  
KW cartilage differentiation; cell proliferative disease; uterine tumour;  
KW bone dysplasia; spondyloepiphyseal dysplasia; achondroplasia;  
KW dysplasia epiphysealis; metaphyseal dysostosis; hyperchondroplasia;  
KW enchondromatosis; hypophosphatasia; osteopetrosis; hyperphosphatasia;  
KW cranioectodysplasia; osteogenesis imperfecta; transgenic;  
KW idiopathic osteoporosis; Engelmann's disease.  
XX  
OS Homo sapiens.  
XX  
PN US2002165361-A1.  
XX  
PD 07-NOV-2002.  
XX  
PF 12-JUN-2001; 2001US-00680708.  
XX  
PR 12-JAN-1993; 93US-00003144.  
XX  
PR 12-JAN-1994; 94WC-US000657.  
XX  
PR 31-MAY-1995; 95US-00455559.  
XX  
PR 01-SEP-1998; 98US-00145060.  
XX  
PA (LEBS/) LEE S.  
XX  
PI (HUYN/) HUYNH T.  
XX  
DR WPI; 2003-255226/25.  
XX  
PT New antibody specifically binding to a GDF-5 polypeptide, useful for  
PT diagnosing and treating cell proliferative disorders with aberrant GDF-5  
PT activity, such as endometriosis, uterine tumors and those involving  
PT skeletal tissues.  
XX  
PS Example 2; Fig 3A; 36pp; English.  
XX  
CC The invention relates to an antibody that specifically binds to growth

CC differentiation factor-5 (GDF-5, a member of the TGF-Beta (transforming  
 CC growth factor beta) superfamily of proteins) polypeptide appearing as  
 CC ABG76018. In order to determine the biological activity of GDF-5 in vivo,  
 CC transgenic mice were constructed that express GDF-5 ectopically. Analysis  
 CC of two independent transgenic mouse lines showed that these animals have  
 CC ectopic bone formation with evident muscle tissue. This showed that GDF-5  
 CC was capable of inducing bone formation in vivo. The antibody is useful  
 CC for the diagnosis and treatment of cell proliferative disorders  
 CC associated with aberrant GDF-5 activity, such as endometriosis, uterine  
 CC tumors, those involving skeletal tissues, endometriositis, cartilage  
 CC differentiation, cell proliferative disease, uterine tumour, bone  
 CC dysplasia, spondyloepiphyseal dysplasia, achondroplasia, dysplasia  
 CC epiphysealis, metaphyseal dysostosis, hyperchondroplasia,  
 CC enchondromatosis, hypophosphatasia, osteopetrosis, hyperphosphatasia,  
 CC craniometaphyseal dysplasia, osteogenesis imperfecta, idiopathic  
 CC osteoporosis and Engelmann's disease. The present sequence represents a  
 CC member of the TGFbeta superfamily used to determine regions of sequence  
 CC similarity for design of degenerate primers for isolation of GDF-5  
 CC  
 XX  
 SQ Sequence 119 AA;

Query Match 100.0%; Score 111; DB 6; Length 119;  
 Best Local Similarity 100.0%; Pred. No. 5,3e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTQLNALS 20  
 |||||  
 Db 74 INPETHPKPCCAPTQLNALS 93

RESULT 34  
 ABB07963  
 ID ABB07963 standard; protein; 131 AA.  
 XX  
 AC ABB07963;  
 XX  
 DT 12-AUG-2002 (first entry)  
 XX  
 DE Human BMP7 with enterokinase recognition sequence.  
 XX  
 KW Osteogenesis; drug delivery system; DDS; collagen; osteopathic; human;  
 KM BMP7; enterokinase.  
 XX  
 CS Homo sapiens.  
 XX  
 PN JP2002058485-A.  
 PD 26-FEB-2002.  
 XX  
 PF 16-AUG-2000; 2000JP-00246744.  
 XX  
 PR 16-AUG-2000; 2000JP-00246744.  
 XX  
 PA (TERU) TERUMO CORP.  
 XX  
 DR WPI: 2002-438612/47.  
 XX  
 DR N-PSDB; ABL41026.  
 XX  
 PT Novel osteogenesis stimulating fused protein having collagen avidity used  
 XX as an osteogenesis stimulator and a localizing agent.  
 PS  
 PS Disclosure; Page 22; 30pp; Japanese.  
 XX  
 CC The invention provides an osteogenesis stimulating fused protein (I) for  
 CC a drug delivery system (DDS) of osteogenic factor, having collagen  
 CC avidity and polypeptides homologous to collagen avidity domain or its  
 CC modified peptides. (I) is used for stimulation of osteogenesis, a  
 CC localizing agent and a slow releasing agent for a drug delivery system.  
 CC The present sequence represents the human BMP7 with enterokinase  
 CC recognition sequence  
 XX  
 SQ Sequence 131 AA;

Query Match 100.0%; Score 111; DB 5; Length 131;  
 Best Local Similarity 100.0%; Pred. No. 5,8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTQLNALS 20  
 |||||  
 Db 86 INPETHPKPCCAPTQLNALS 105

RESULT 35  
 AAR53365  
 ID AAR53365 standard; protein; 132 AA.  
 XX

AC AAR53365;  
 XX

DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 06-JUN-1994 (first entry)  
 XX

DE N-terminally truncated osteogenic protein OPI (OPI-16ser).  
 XX

KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 KM vascularisation; mineralisation; differentiation.  
 XX

OS Homo sapiens.  
 XX

PN US5266683-A.  
 XX

PD 30-NOV-1993.  
 XX

PF 21-FEB-1992; 92US-00841646.  
 XX

PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621848.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 XX

PA (STYC) STRYKER CORP.  
 XX

PI Kuberasampath T, Ozkaynak E, Rueger DC, Pang RH, Oppermann H;  
 XX

DR WPI: 1993-395405/49.  
 XX

DR N-PSDB; AAQ53141.  
 XX

PT New pure mammalian osteogenic proteins - induce cartilage and  
 XX endochondral bone formation when in association with a matrix.  
 XX

PS Claim 12; Col 69-72; 128pp; English.  
 XX

CC This sequence is a fragment of the osteogenic protein OPI and is  
 CC designated OPI-16ser. The osteogenic protein when in association with a  
 CC matrix can induce at the locus of an implant the full development cascade  
 CC of endochondral bone formation including vascularisation, mineralisation  
 CC and bone marrow differentiation. The osteogenic protein can also be used  
 CC to repair both bone and cartilage in the treatment of osteoarthritis.  
 CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
 XX  
 SQ Sequence 132 AA;

Query Match 100.0%; Score 111; DB 2; Length 132;

Best Local Similarity 100.0%; Pred. No. 5.8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
Db 87 INPETHKPCCAPTQNLNALS 106

RESULT 36  
AAW95450  
ID AAW95450 standard; protein, 132 AA.

XX AC AAW95450;  
XX DT 26-MAR-1999 (first entry)

DE N-terminally truncated mature human OPI, OPI-16Ser (residues 330-431).

XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
XX bone morphogenic protein; BMP; growth factor-beta superfamily;  
XX polycystic kidney disease; multicystic dysplastic kidney disease;  
XX uremic medullary cystic disease; human; OPI; truncated.

XX OS Homo sapiens.

XX PN W09850061-A1.

XX PD 12-NOV-1998.

XX PE 06-MAY-1998; 98WO-US009268.

XX PR 07-MAY-1997; 97US-0045909P.

XX PA (BIOJ) BIOGEN INC.

XX PI Gjostrup P, Harris R;

XX DR WPI; 1999-070084/06.

XX PT Treating cystic kidney disease - using renal therapeutic agents or  
XX sequences encoding them, especially from the osteogenic protein/bone  
XX morphogenic protein family.

XX PS Claim 4; Page: 67pp; English.

XX CC The invention relates to methods for treating cystic kidney diseases. The  
XX method comprises administering an effective amount of a renal therapeutic  
XX agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
XX agent is preferably a soluble or membrane bound polypeptide, e.g. a  
XX member of the osteogenic protein/bone morphogenic protein (OP/BMP) family  
XX within a transforming growth factor-beta superfamily of proteins. It is  
XX especially one of the polypeptides hOP1, hOP1-PP, OPI-16Ser, OPS, OP7,  
XX OPI-16Ser, OPI-16Leu, OPI-16Val, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
XX biologically active homologues. The method is used to treat humans  
XX having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
XX (infantile) polycystic disease, multicystic dysplastic kidney disease,  
XX uremic medullary cystic disease, and autosomal dominant polycystic  
XX kidney disease. The present sequence represents a N-terminally truncated  
XX mature human osteogenic protein 1 (OPI) that can be used as a therapeutic  
XX agent in the method of the invention. Note: This sequence is not provided  
XX in the specification. It has been derived from the human OPI sequence  
XX (AAW95448) obtained from U.S. Patent No. 5,266,683

XX SQ Sequence 132 AA;

Query Match 100.0%; Score 111; DB 2; Length 132;  
Best Local Similarity 100.0%; Pred. No. 5.8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
Db 87 INPETHKPCCAPTQNLNALS 106

RESULT 37

AAI08297  
ID AAI08297 standard; protein, 138 AA.

XX AC AAI08297;

XX DT 14-JUL-1999 (first entry)

DE Human growth factor protein fragment BMP-7.

XX Growth factor; human; dimer; cysteine knot; cellular inclusion body;  
XX pharmaceutical.

XX OS Homo sapiens.

XX PN DE19748734-A1.

XX PD 06-MAY-1999.

XX PF 05-NOV-1997; 97DE-01048734.

XX PR 05-NOV-1997; 97DE-01048734.

XX PA (GBFB) GES BIOTECHNOLOGISCHE FORSCHUNG MBH.

XX PI Kaerst U, Mueller C, Rinas U, Welch H, Erdmann H;

XX DR WPI; 1999-278785/24.

XX PT Preparing active growth factor dimers from inclusion bodies in high  
XX yield.

XX PS Claim 14; Page 11; 14pp; German.

XX CC This invention describes the novel preparation of biologically active  
XX dimers of recombinant human growth factors of the cysteine knot family  
XX starting from cellular inclusion bodies. Such dimers are useful in  
XX pharmaceutical compositions and the method provides yields of 31-39.7%,  
XX in examples, compared with about 10% for the conventional method (see  
XX CC Biochemistry, 28 (1989) 2956). AAI08278-Y08301 are human growth factor  
XX protein fragments used in the method of the invention

XX SQ Sequence 138 AA;

Query Match 100.0%; Score 111; DB 2; Length 138;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
Db 93 INPETHKPCCAPTQNLNALS 112

RESULT 38

AAK23187  
ID AAK23187 standard; protein, 139 AA.

XX AC AAK23187;

XX DT 27-AUG-2003 (revised)

XX DT 01-JAN-1980 (first entry)

DE Osteogenic protein for dispersal in implantable osteogenic device.

XX Osteogenic; implant; endochondral; bone; OPI.

XX OS Mammalia.

XX PN W09118558-A.

XX PD 12-DEC-1991.



XX 29-MAY-1990; 90US-00529852.  
XX 29-MAY-1990; 90US-00529852.  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
XX Kuberamp T, Berlowitz TL;  
XX WPI, 1992-007153/01.  
XX Osteogenic device for implantation - comprising osteogenic protein  
XX dispersed in porous matrix of collagen and glycosaminoglycan.  
XX Claim 8; Page 34; 39pp; English.  
XX The invention relates to an implantable device for inducing endochondral  
XX bone formation in a shape conforming to the shape of the device. The  
XX device comprises an osteogenic protein dispersed in a porous matrix which  
XX is a polymer of collagen and glycosaminoglycan crosslinked to an Mc value  
XX of 800 to 60,000. The osteogenic protein comprises a pair of subunits  
XX constituting a stable dimer under oxidising conditions. The present  
XX sequence (designated OPI), when dimerised to form a homodimer or a  
XX heterodimer with certain other protein sequences, can induce endochondral  
XX bone formation and hence is preferred as one of the pair of subunits.  
XX (Updated on 27-AUG-2003 to correct OS field.)  
XX Sequence 139 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 2; Length 139;  
XX Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
XX 1 INPETHKPCCAPTQNLNALS 20  
XX 94 INPETHKPCCAPTQNLNALS 113  
XX  
XX RESULT 39  
XX AAR27285 standard; protein; 139 AA.  
XX AAR27285;  
XX 25-MAR-2003 (revised)  
XX 26-FEB-1993 (first entry)  
XX Mature human osteogenic protein hOPI.  
XX Morphogen; morphogenic protein.  
XX Homo sapiens.  
XX Key Location/Qualifiers  
XX Region 38..139  
XX /note="conserved seven cysteine skeleton"  
XX W09215323-A1.  
XX 17-SEP-1992.  
XX 11-MAR-1992; 92WO-US001968.  
XX 11-MAR-1991; 91US-00667274.  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
XX Cohen CM, Kuberampath T, Pang RHL, Oppermann H, Rueger DC;  
XX WPI, 1992-331475/40.  
XX Compans, for increasing progenitor cell population - contain a morphogen  
XX to induce proliferation, useful for inhibiting neoplastic growth.  
XX

PT inducing tissue repair and in diagnosis of tissue dysfunction.  
XX Claim 11; Page 82-83; 132pp; English.  
XX Mature hOPI is one of the preferred known morphogens which can be used in  
XX the manufacture of pharmaceuticals for inducing non-chondrogenic  
XX mammalian tissue growth, progenitor cell proliferation and hepatic tissue  
XX growth and for maintaining the phenotypic expression of differentiated  
XX cells in a mammal. Morphogens sharing at least 70% homology with hOPI or  
XX at least 65% identity with residues 43-139 of hOPI are included. (Updated  
XX on 25-MAR-2003 to correct PN field.)  
XX Sequence 139 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 2; Length 139;  
XX Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX  
XX 1 INPETHKPCCAPTQNLNALS 20  
XX 94 INPETHKPCCAPTQNLNALS 113  
XX  
XX RESULT 40  
XX AAR53366 standard; protein; 139 AA.  
XX AAR53366;  
XX 25-MAR-2003 (revised)  
XX 01-JUL-2002 (revised)  
XX 06-JUN-1994 (first entry)  
XX N-terminally truncated osteogenic protein OPI (OPI-188ser).  
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
XX vascularisation; mineralisation; differentiation.  
XX Homo sapiens.  
XX US5266683-A.  
XX 30-NOV-1993.  
XX 21-FEB-1992; 92US-00841646.  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 23-FEB-1989; 89US-00315342.  
XX 17-OCT-1988; 89US-00422613.  
XX 17-OCT-1988; 89US-00422613.  
XX 22-FEB-1990; 90US-00483913.  
XX 20-AUG-1990; 90US-00569920.  
XX 07-SEP-1990; 90US-00579865.  
XX 18-OCT-1990; 90US-00599543.  
XX 18-OCT-1990; 90US-00600024.  
XX 21-NOV-1990; 90US-00616374.  
XX 04-DEC-1990; 90US-00621849.  
XX 04-DEC-1990; 90US-00621988.  
XX 20-FEB-1991; 91US-00660162.  
XX 20-DEC-1991; 91US-00810560.  
XX 28-JAN-1992; 92US-00827052.  
XX (STYC) STRYKER CORP.  
XX Kuberampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
XX WPI, 1993-395405/49.  
XX N-PSDB; AAQ53141.  
XX New pure mammalian osteogenic proteins - induce cartilage and  
XX endochondral bone formation when in association with a matrix.  
XX

PS Claim 13, Col 69-72; 128pp; English.

XX This sequence is a fragment of the osteogenic protein Opl and is  
CC designated Opl-18Ser. The osteogenic protein when in association with a  
CC matrix can induce at the locus of an implant the full development cascade  
CC of endochondral bone formation including vascularisation, mineralisation  
CC and bone marrow differentiation. The osteogenic protein can also be used  
CC to repair both bone and cartilage in the treatment of osteoarthritis.  
CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
CC  
XX  
SQ Sequence 139 AA;

QY 1 INPFTVPKPCCAPTQLNMAIS 20 100.0%; Score 111; DB 2; Length 139;  
DB 94 INPFTVPKPCCAPTQLNMAIS 113 Best Local Similarity 100.0%; Pred. No. 6,1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 41  
AAR33921  
ID AAR33921 standard; protein; 139 AA.  
XX  
AC AAR33921;  
XX  
DT 25-MAR-2003 (revised)  
DT 13-JUL-1993 (first entry)  
XX  
DE Morphogen hOP-1.  
XX  
XX Morphogen; homodimer; stimulate; proliferation; progenitor cell;  
KW differentiation; growth; redifferentiation; transformation; human; mouse;  
KW Drosophila; Xenopus; committed cells.  
XX  
XX Homo sapiens.  
OS  
XX  
XX WO9305172-A1.  
PN  
XX  
XX 18-MAR-1993.  
PD  
XX 28-AUG-1992; 92MO-US007359.  
PF  
XX 30-AUG-1991; 91US-00752861.  
PR  
XX  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
PA  
XX  
XX Smart JE, Oppermann H, Ozkaynak E, Kuberaseampath T, Rueger DC;  
PI Pang RH, Cohen CN;  
PI  
XX WPI, 1993-100993/12.  
DR  
XX  
XX Screening cpds. to determine ability to modulate effective concn. of a  
PT morphogen - by assaying test tissue type cells for parameter indicative  
PT of a prodn. level change of morphogen.  
PS  
XX Disclosure; Page 73-74; 132pp; English.  
XX  
XX The sequences given in AAR33921-30 are morphogens derived from human,  
CC Drosophila, Xenopus and murine sources. These morphogens are inactive  
CC when reduced but are active as oxidised homodimers and when oxidised in  
CC combination with other morphogens. These morphogens are capable of  
CC stimulating proliferation of progenitor cell, stimulating the  
CC differentiation of progenitor cells, stimulating the proliferation of  
CC differentiated cells and supporting the growth and maintenance of  
CC differentiated cells, including the redifferentiation of transformed  
CC cells. These morphogens may also be capable of inducing redifferen-  
CC ciation of committed cells under appropriate environmental conditions.  
CC (Updated on 25-MAR-2003 to correct PN field.)  
XX  
SQ Sequence 139 AA;

```

Query Match          100.0%; Score 111; DB 2; Length 139;
Best Local Similarity 100.0%; Pred. No.6.1e-07;
Matches            20; Conservative    0; Mismatches   0; Indels      0; Gaps       0;

OY              1 INPETYVKPCCAPTOLNAIS 20
                |||||
Db               94 INPETYVKPCCAPTOLNAIS 113

RESULT 42
AAR33398
ID AAR33398 standard; protein; 139 AA.
XX AC
XX AR33398;
XX DT 25-MAR-2003 (revised)
DT 15-JUL-1993 (first entry)
DE Human mature OP-1.
XX morphogenic; osteogenic protein; developmental cascade; human OP-1;
KW hOP-1; mouse OP-1; MOF-1; HOF-2; MOF-2; CBMP2A; CBMP2B; Drosophila DPP;
KW decapentapegic; Xenopus Vgl; mouse Vgr-1; GDF-1; BMP3; BMPs; BMPc;
KW morphogen 60(A); inflammation; anti-inflammatory;
XX Transforming Growth Factor; TGF-beta super-family.
XX Homo sapiens.
OS
XX Key Location/Qualifiers
FH Region 43..139
FT /label=C-terminal_region
FT /note="contains conserved 6 Cys skeleton"
FX WO9304692-A1.
PN 18-MAR-1993.
XX PD
XX PF 28-AUG-1992; 92WO-US007358.
XX PR 30-AUG-1991; 91US-00752764.
PR 30-AUG-1991; 91US-00752861.
PR 30-AUG-1991; 91US-00753059.
PA (CREA-) CREATIVE BIOMOLECULES INC.
PI Kuberanampath T, Pang RHU, Oppermann H, Rueger DC, Cohen CM;
PI Ozkaynak E, Smart JE;
XX WPI; 1993-100652/12.
DR Morphogen-induced modulation of inflammatory response - and resulting
PT tissue damage, e.g. in autoimmune diseases, diabetes, asthma, ischemia
PT reperfusion injury, etc.
XX PS Claim 30; Page 102; 165pp; English.
CC Human osteogenic protein (OP)-1 is a preferred morphogen for use in
CC treating tissue damage in e.g. inflammatory disease, autoimmune disease,
CC arthritis, psoriasis, dermatitis, diabetes and emphysema. Proteins having
CC at least 60% homology with amino acids 43-139 of hOP-1 can also be used.
CC (Updated on 25-MAR-2003 to correct PW field.)
XX SQ Sequence 139 AA;
QY Query Match 100.0%; Score 111; DB 2; Length 139;
DB Best local similarity 100.0%; Pred.No.6.1e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0
```

RESULT 43  
XX AAR31467 standard; protein, 139 AA.  
XX ID AAR31467;  
XX AAR31467;  
XX AC 25-MAR-2003 (revised)  
XX DT 26-MAY-1993 (first entry)  
XX DE Mature P3 OF 31-34 subunit D.  
XX KW Subunit; D; B; C; P3 OF 31-34; osteogenic; active; protein; bone;  
XX heterodimer; disulphide bond; formation; repair; defect.  
XX OS Homo sapiens.  
XX PN W09300049-A1.  
XX PD 07-JAN-1993.  
XX PF 01-JUL-1991; 91WO-US004686.  
XX PR 20-JUN-1991; 91US-00718274.  
XX PS (XOMA ) XOMA CORP.  
XX PI Grima L, Theofan G, Parsons TF;  
XX WP1; 1993-036101/04.  
XX DR N-PSDB; AAQ34514.  
XX DT Osteogenically active protein preparations for repairing bone defects -  
XX PT comprise hetero-dimer of P3 OF 31-34 sub-unit B and P3 OF 31-34 sub-unit  
XX D.  
XX PS Disclosure; Page 60; 107pp; English.  
XX CC The sequences given in AAR31467-69 represent the subunits D, B and C of  
XX P3 OF 31-34, respectively. P3 OF 31-34 is an osteogenically active  
XX protein. A primary osteogenically active peptide is formed of a  
XX heterodimer of P3 OF 31-34 subunits B and D which are linked by at least  
XX one disulphide bond. The B/D heterodimer stimulates osteo- genesis and  
XX can be used to induce bone formation in mammals, to repair bone defects.  
XX (Updated on 25-MAR-2003 to correct PN field.)  
XX SQ Sequence 139 AA;  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6,1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALS 20  
DB 94 INPETHKPCCAPTQLNALS 113  
RESULT 44  
XX AAR46724 standard; protein, 139 AA.  
XX ID AAR46724;  
XX AAR46724;  
XX AC 25-MAR-2003 (revised)  
XX DT 25-AUG-1994 (first entry)  
XX DE Human mature osteogenic protein hOP1.  
XX KW human osteogenic protein; hOP1; morphogen; infant food formulation;  
XX tissue morphogenesis; tissue development; bone growth;  
XX morphogen-enriched nutritional product.  
XX OS Homo sapiens.

XX PN W09403075-A2.  
XX PD 17-FEB-1994.  
XX PF 29-JUL-1993; 93WO-US007190.  
XX PR 31-JUL-1992; 92US-00923780.  
XX PR 16-SEP-1992; 92US-00946235.  
XX PR 04-MAR-1993; 93US-00028335.  
XX PR 31-MAR-1993; 93US-00040510.  
XX PA (CREA-) CREATIVE BIOMOLECULES INC.  
XX PI Kuberassampath T, Cohen CM, Rueger DC, Oppermann H, Pang RHL;  
XX WP1; 1994-065304/08.  
XX DT Morphogen enriched dietary compositions and infant formula - capable of  
XX PT enhancing tissue morphogenesis, development and viability, e.g. in  
XX PT infants, aged individuals and metabolic disorders, e.g. anorexia nervosa,  
XX PT etc.  
XX PS Claim 27; Page 100; 160pp; English.  
XX CC Human osteogenic protein hOP1 and proteins having at least 70% homology  
XX CC with it are preferred morphogens for inclusion in new morphogen-enriched  
XX CC nutritional formulations. The formulations are dietary compositions  
XX CC suitable for people at risk for tissue damage due to protein energy  
XX CC malnutrition or to altered metabolism function and infant formulations to  
XX CC enhance tissue development in an infant or juvenile. (Updated on 25-MAR-  
XX CC 2003 to correct PN field.)  
XX SQ Sequence 139 AA;  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6,1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALS 20  
DB 94 INPETHKPCCAPTQLNALS 113  
RESULT 45  
XX AAR60967 standard; protein, 139 AA.  
XX ID AAR60967;  
XX AAR60967;  
XX AC 25-MAR-2003 (revised)  
XX DT 11-OCT-1994 (first entry)  
XX DE Mature human OP-1.  
XX KW OP-1; OP-2; CEMF2; Vg1(fx); Vgr(fx); DPP(fx); GDF-1(fx); 60A(fx);  
XX BMP3(fx); BMP5(fx); BMP6(fx); osteogenic protein; morphogen;  
XX KW morphogenic protein; morphogenesis; progenitor; differentiation;  
XX KW stimulation; Drosophila melanogaster; fruit fly.  
XX OS Homo sapiens.  
XX PN W09406447-A2.  
XX PD 31-MAR-1994.  
XX PF 15-SEP-1993; 93WO-US008741.  
XX PR 15-SEP-1992; 92US-00945292.  
XX PR 04-MAR-1993; 93US-00028335.  
XX PR 31-MAR-1993; 93US-00040510.  
XX PA (CREA-) CREATIVE BIOMOLECULES INC.



```

XX AC AAM00221;
XX XX
XX DT 21-NOV-1996 (first entry)
XX XX
XX DE Human mature osteogenic protein OP-1.
XX XX
XX KM Morphogen; osteogenic protein; dentine; tooth decay; caries;
XX KM morphogenesis; odontoblast; OP-1.
XX OS Homo sapiens.
XX FH Key Location/Qualifiers
XX FT 38..139
XX FT Domain /label=C-terminal_domain
XX PN /note="7-cysteine domain of OP-1"
XX MO626737-A1.
XX PD 06-SEP-1996.
XX PF 14-FEB-1996; 96WO-US002169.
XX PR 01-MAR-1995; 95US-00396930.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Charette MF, Rutherford RB;
XX DR WPI; 1996-412583/41.
XX PT Use of morphogen(s), e.g. osteogenic proteins, on dental surfaces - for
XX PT inducing dentine morphogenesis, desensitising teeth or sealing tooth
XX PT cavities.
XX PS Claim 28; Page 42; 106pp; English.
XX CC Human hippocampus osteogenic protein OP-1 (AAM00221) is a morphogenically
XX CC active dimeric protein having a C-terminal 7-cysteine domain that shares
XX CC a defined relationship with similar domains of other morphogenic proteins
XX CC (see also AAM00219-35). It comprises amino acids 293-431 of full-length
XX CC OP-1 (AAM00236), and can be expressed from intact or truncated cDNA (see
XX CC also AAT33441) in prokaryotic or eukaryotic host cells. OP-1 and other
XX CC morphogens are used to induce dentine morphogenesis, to seal dental
XX CC cavities and to desensitise teeth to pressure and/or temp
XX CC
SQ Sequence 139 AA;
Query Match 100.0%; Score 111; DB 2; Length 139;
Best Local Similarity 100.0%; Pred. No. 6.1e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQLNIAIS 20
DB 94 INPETHKPCCAPTQLNIAIS 113
RESULT 49
AAM40180
ID AAM40180 standard; protein; 139 AA.
XX AC AAM40180;
XX DT 08-JUN-1998 (first entry)
XX DE Human hOP1 mature protein.
XX KM Osteogenic protein; OP-1; bone morphogenic protein; OP/BMP family;
XX KM chronic renal failure; renal therapeutic agent; diabetes; diabetes;
XX KM nephropathy; glomerulopathy; hypertrophy; sclerosis; nephritis; human;
XX KM dysplasia; fibrosis; glomerular filtration rate; GFR.
XX OS Homo sapiens.

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XX PN MO9741881-A1.
XX PD 13-NOV-1997.
XX PF 06-MAY-1997; 97WO-US007816.
XX PR 06-MAY-1996; 96US-00643321.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Sampath KT, Cohen CM;
XX DR WPI; 1997-558690/51.
XX DR N-PSDB; AAV10345.
XX PT Treatment of chronic renal failure - using an osteogenic protein/bone
XX PT morphogenetic protein renal therapeutic agent or morphogen or renal
XX PT mesenchymal progenitor cells.
XX PS Disclosure; Page 44; 113pp; English.
XX CC This sequence represents the mature human osteogenic protein, hOP-1. This
XX CC protein is used in a method for the treatment of a mammal having, or at
XX CC risk of, chronic renal failure which comprises administering an
XX CC osteogenic protein/bone morphogenetic protein (OP/BMP) renal therapeutic
XX CC agent or morphogen. The method can be used for treating e.g. chronic
XX CC renal failure, end-stage renal disease, chronic diabetic nephropathy,
XX CC diabetic glomerulopathy, diabetic renal hypertrophy, hypertensive
XX CC nephrosclerosis, hypertensive glomerulosclerosis, chronic
XX CC glomerulonephritis, hereditary nephritis, renal dysplasia, or a patient
XX CC afflicted with e.g. glomerular hypertrophy, tubular hypertrophy,
XX CC glomerulosclerosis, tubulointerstitial sclerosis or renal fibrosis. Such
XX CC therapeutic agents can prevent, inhibit or delay the progressive loss of
XX CC functional nephron units and the progressive decline in glomerular
XX CC filtration rate (GFR) which slowly but inevitably leads to the need for
XX CC renal replacement therapy
XX CC
SQ Sequence 139 AA;
Query Match 100.0%; Score 111; DB 2; Length 139;
Best Local Similarity 100.0%; Pred. No. 6.1e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQLNIAIS 20
DB 94 INPETHKPCCAPTQLNIAIS 113
RESULT 50
AAM36871
ID AAM36871 standard; protein; 139 AA.
XX AC AAM36871;
XX DT 25-MAR-2003 (revised)
XX DT 10-MAR-1998 (first entry)
XX DE Mature protein amino acid sequence of human osteogenic protein 1 (hOP-1).
XX KM Human osteogenic protein; OP; OP-1; morphogen; morphogenic protein;
XX KM embryogenesis; organ maintenance; tissue-specific morphogenesis;
XX KM arthritis; emphysema; osteoporosis; cirrhosis.
XX OS Homo sapiens.
XX FH Key Location/Qualifiers
XX FT 38..139
XX FT Region /note="conserved 7 Cys skeleton"
XX PN US5650276-A.
XX PD 22-JUL-1997.

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XX 20-JUL-1994; 94US-00278729.
PF 11-MAR-1991; 91US-00662724.
PR 30-AUG-1991; 91US-00752764.
PR 30-AUG-1991; 91US-00752861.
PR 28-AUG-1992; 92US-00938021.
XX
PA (CREA-) CREATIVE BIOMOLECULES INC.
XX
PI Ozkaynak E, Oppermann H, Pang RH, Cohen CM, Kuberaampath T;
PI Rueger DC, Smart JE;
XX
DR WPI; 1997-384665/35.
DR N-PSDB; AAT97877.
PT Screening for compounds which modulate morphogen expression - by
PT incubating in the presence of epithelial cells which contain a cellular
PT gene for morphogenic protein expression.
XX
PS Claim 1; Col 35-36; 49pp; English.
XX
CC The present sequence represents the mature protein of human osteogenic
CC protein-1 (hOP-1). hOP-1 was first found in bone tissue, and is now known
CC to be produced at relatively high levels in cells derived from renal or
CC adrenal tissue. OP-1 proteins are a group of morphogenetically active
CC proteins. Morphogens are inactive when reduced, but are active as
CC oxidised homodimers and when oxidised with other morphogens (e.g.
CC AAW36854-62). Comparison of the amino acid sequences of these morphogens
CC has identified a consensus 6-7 cysteine motif at the C-terminal.
CC Morphogenic proteins such as OP-1 play an important role, not only in
CC embryogenesis, but also in tissue and organ maintenance and repair in
CC mammals. They induce a developmental cascade of tissue-specific
CC morphogenesis in a mammal. A novel method is described for screening a
CC candidate compound for the ability to modulate expression of a cellular
CC gene encoding a naturally occurring morphogenic protein. The candidate
CC compound is incubated with epithelial cells which express the cellular
CC gene, and after a period of time the epithelial cells are assayed for the
CC presence of or the amount of the protein expressed by the cellular gene.
CC A change in the level of the morphogenic protein relative to the level in
CC the epithelial cells in the absence of the candidate compound is
CC indicative of the ability of the compound to modulate expression of the
CC cellular gene. The method can be used to identify compounds which can
CC increase or decrease morphogen production or levels. Such compounds can
CC be used in the treatment of e.g. arthritis, emphysema, osteoporosis,
CC kidney disease, lung diseases, cardiomyopathy, and cirrhosis of the
CC liver. (Updated on 25-MAR-2003 to correct PR field.)
XX
SQ Sequence 139 AA;
Query Match 100.0%; Score 111; DB 2; Length 139;
Best Local Similarity 100.0%; Pred. No. 6,1e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQNLNAIS 20
DB 94 INPETHKPCCAPTQNLNAIS 113
RESULT 51
AAW54064
ID AAW54064 standard; protein; 139 AA.
XX
AC AAW54064;
XX
DT 25-MAR-2003 (revised)
DT 10-AUG-1998 (first entry)
XX
DE Bone morphogenetic protein-7.
XX
KM Bone morphogenetic protein-8; BMP-8; bone formation; cartilage formation;
KM bone disorder; cartilage injury; therapy; BMP-7.
XX

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OS Mammalia.
XX
PN US5756308-A.
XX
PD 26-MAY-1998.
XX
PF 21-DEC-1994; 94US-00360914.
XX
PR 07-DEC-1993; 93US-00163877.
PR 15-NOV-1994; 94WO-US013181.
XX
PA (GENY) GENETICS INST INC.
XX
PI McCoy J, Wolfman NM;
XX
DR WPI; 1998-321530/28.
DR N-PSDB; AAV24033.
PT DNA encoding bone morphogenetic protein 8 mutant - yielding correctly
PT folded heterodimer(s).
XX
PS Disclosure; Col 25-26; 18pp; English.
XX
CC This sequence is the bone morphogenetic protein-7 (BMP-7). A mutated
CC version of the BMP-8 DNA sequence, encoding a protein having Ser-63
CC replaced with His, is the BMP-8 DNA sequence of the invention. Bone
CC morphogenetic proteins are able to induce bone or cartilage formation and
CC are expected to be useful for treating bone or cartilage injuries or
CC disorders. Expression of the BMP-8 mutant DNA in bacterial cells yields
CC correctly folded BMP-2/8 heterodimers. (Updated on 25-MAR-2003 to correct
CC PR field.)
XX
SQ Sequence 139 AA;
Query Match 100.0%; Score 111; DB 2; Length 139;
Best Local Similarity 100.0%; Pred. No. 6,1e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQNLNAIS 20
DB 94 INPETHKPCCAPTQNLNAIS 113
RESULT 52
AAW84215
ID AAW84215 standard; protein; 139 AA.
XX
AC AAW84215;
XX
DT 25-MAR-1999 (first entry)
XX
DE Bone morphogenetic protein active fragment.
XX
KM Proteinase site; bone morphogenetic fusion protein; bone binding site;
KM bone morphogenetic protein; transforming growth factor beta;
KM active fragment; wound healing; bone growth; purification tag.
XX
OS Homo sapiens.
XX
PN W09855137-A1.
XX
PD 10-DEC-1998.
XX
PF 02-JUN-1998; 98WO-US011189.
XX
PR 03-JUN-1997; 97US-00868452.
XX
PA (NIMN) NIMNI M E.
PA (HALL) HALL F L.
PA (WOLL) WOLL L.
PA (HANB) HAN B.
PA (SHOR) SHORS E C.
XX

```

PI Nimiti ME, Hall FL, Wu L, Han B, Shore EC;  
 XI WPI; 1999-059875/05.  
 XX DR N-PSDB; AAV99383.  
 XX PT New bone morphogenetic fusion proteins - comprising a purification tag  
 PT and a bone morphogenetic active fragment, used for enhancing wound  
 PT healing or bone growth.  
 PS Claim 14; Page 51-52; 64pp; English.  
 XX  
 CC The present sequence represents a bone morphogenetic protein active  
 CC fragment, that was used in the creation of the bone morphogenetic fusion  
 CC proteins of the invention. The bone morphogenetic fusion protein may  
 CC contain some or all of the following elements: a purification tag, a  
 CC protease site, an ECM/bone binding site, a second proteinase site, and  
 CC a bone morphogenetic protein active fragment. The fusion proteins of the  
 CC invention also includes proteins that have transforming growth factor  
 CC beta active fragments instead of bone morphogenetic protein active  
 CC fragments. The bone morphogenetic fusion proteins can be used for  
 CC enhancing wound healing or bone growth  
 CC  
 XX Sequence 139 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHPPCCAPFOLNNAIS 20  
 ||||||||||||||||  
 Db 94 INPETHPPCCAPFOLNNAIS 113  
 RESULT 53  
 AAW95449  
 ID AAW95449 standard; protein, 139 AA.  
 XX  
 AC AAW95449;  
 XX  
 DT 26-MAR-1999 (first entry)  
 XX  
 DE Mature human osteogenic protein 1 (OP1) (residues 293-431).  
 XX  
 XX Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KW bone morphogenetic protein; BMP; growth factor-beta superfamily;  
 KW polycystic kidney disease; multicystic dysplastic kidney disease;  
 KW uremic medullary cystic disease; human.  
 XX  
 OS Homo sapiens.  
 OS  
 XX WO9850061-A1.  
 FN  
 PD 12-NOV-1998.  
 XX  
 XX 06-MAY-1998; 98WO-US009268.  
 XX  
 XX 07-MAY-1997; 97US-0045909P.  
 XX  
 PA (BIOJ ) BIOGEN INC.  
 XX  
 PI Gjorstrup P, Harris R;  
 XX  
 DR WPI; 1999-070084/06.  
 XX  
 PT Treating cystic kidney disease - using renal therapeutic agents or  
 PT sequences encoding them, especially from the osteogenic protein/bone  
 PT morphogenic protein family.  
 XX  
 PS Claim 4; Page; 67pp; English.  
 XX  
 CC The invention relates to methods for treating cystic kidney diseases. The  
 CC method comprises administering an effective amount of a renal therapeutic  
 CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic

CC	agent is preferably a soluble or membrane bound polypeptide, e.g. a
CC	member of the osteogenic protein/bone morphogenetic protein (Op/BMP) family
CC	within a transforming growth factor-beta superfamily of proteins. It is
CC	especially one of the polypeptides hOP1, hOP1-PP, OPI-16Ser, OPI-16P,
CC	OPI-16Ser, OPI-16Leu, OPI-16Met, OPI-16Ala, OPI-16Val, MOPI, MOPI-PP,
CC	hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their
CC	biologically active homologues. The method is used to treat humans
CC	having, or at risk of, cystic kidney disease, e.g. autosomal recessive
CC	(infantile) polycystic disease, multicystic dysplastic kidney disease,
CC	uremic medullary cystic disease, and autosomal dominant polycystic
CC	kidney disease. The present sequence represents a mature human osteogenic
CC	protein 1 (OPI) that can be used as a therapeutic agent in the method of
CC	the invention. Note: This sequence is not provided in the specification.
CC	It has been derived from the human OPI sequence (AAW95448) obtained from
CC	U.S. Patent No. 5,266,683
XX	
SQ	Sequence 139 AA:
Query Match	100.0%; Score 111; DB 2; Length 139;
Best Local Similarity	100.0%; Pred. No. 6.1e-07;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY	1 INPETYRPPCCAPPOLNAIS 20       DB 94 INPETYRPPCCAPPOLNAIS 113
RESULT 54	
AA70755	
ID	AA70755 standard; protein: 139 AA.
XX	
AA70755;	
DT	24-JUL-2000 -(first entry)
XX	
DE	Mature modified human BMP-7 protein.
XX	
KW	Bone morphogenetic protein; BMP-7; human; MP52, TGF-beta superfamily; transforming growth factor-beta; antagonist; cytostatic; osteopathic; prevention; ossification; metabolic bone disease; calcification; bone; therapy; tumor; cartilage; osteogenic; Paget's disease; screening; myositis ossificans; arterial sclerosis.
XX	
OS	Homo sapiens.
XX	
Key	Location/Qualifiers
PH	40..58
FT	/label= "Receptor binding site"
FT	/note= "Composed of two vicinal peptide regions"
FT	50
FT	/note= "Met of mature human MP52 protein at position 30 is replaced with Leu"
FT	52
FT	/note= "Allylphenylated Trp"
FT	55
FT	/note= "Allylphenylated Trp"
FT	80..97
FT	/label= "Receptor-binding site"
FT	/note= "Composed of two vicinal peptide regions"
FT	91
FT	/note= "Met of mature human MP52 protein at position 71 is replaced with Val"
FT	94
FT	/note= "Met of mature human MP52 protein at position 74 is replaced with Ile"
PN	WO200021998-A1.
PD	20-APR-2000.
XX	
PF	04-OCT-1999; 99WO-IB001621.
XX	
PR	09-OCT-1998; 98UP-00288103.

XX (HMRI ) HOECHST MARION ROUSSEL.  
PA  
XX  
XX Katsura M, Kimura M;  
XX  
XX WPI; 2000-317945/27.  
XX  
XX Bone morphogenetic protein antagonist useful for prevention and treatment  
XX of ectopic ossification and metabolic diseases with calcification, is  
XX obtained by chemical modification or genetic engineering.  
XX  
XX Claim 9; Page 35; 40pp; English.  
XX  
XX The present sequence is the modified mature human BMP-7 protein. It  
XX belongs to the bone morphogenetic protein (BMP) family. Modification or  
XX replacement of Met at locations 30, 71, 74 and Trp at positions 32, 35 of  
XX the mature BMP2 protein to a hydrophilic or polar amino acid residue by  
XX chemical modification, yields a mature protein having an antagonistic  
XX activity against BMP. The modified sequence functions as an antagonist of  
XX bone morphogenetic activity, that has cytostatic and osteopathic  
XX activity. This antagonist is useful for prevention and therapy of ectopic  
XX ossification or metabolic diseases with calcification. It is used for  
XX treatment of tumors in the bone and cartilage and metabolic bone  
XX diseases such as Paget's disease. It is effective in suppressing symptoms  
XX of ossification of posterior longitudinal ligament, ectopic ossification  
XX caused by stress of operation, traumatic myositis ossificans, and arterial  
XX ossification by defect of oxygen supply, osteogenic tumour and arterial  
XX sclerosis. It can be used as a reagent for screening agents which compete  
XX with BMP and for receptor binding  
SQ Sequence 139 AA;  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHPKCCAPTQNLNALS 20  
DB 94 INPETHPKCCAPTQNLNALS 113  
RESULT 55  
AAV92594  
ID AAV92594 standard; protein, 139 AA.  
XX  
XX AAV92594;  
XX  
XX 10-AUG-2000 (first entry)  
XX  
XX Mature mutant OP-1 construct H2223.  
XX  
XX finger 2 subdomain; BMP; TGF-beta family; protein refolding; OP-1;  
XX fusion protein; osteopathic; antibacterial; cytostatic; mutant.  
XX  
XX Homo sapiens.  
XX  
XX WO200020449-A2.  
XX  
XX 13-APR-2000.  
XX  
XX 07-OCT-1999; 99WO-US023372.  
XX  
XX 07-OCT-1998; 98US-0103418P.  
XX  
XX 16-AUG-1999; 99US-00375333.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Oppermann H, Tai M, McCartney J;  
XX  
XX WPI; 2000-303743/26.  
XX  
XX A biologically active TGF-beta family member fusion protein competent to  
XX refold, comprising a C-terminal linked TGF-beta family protein.

XX  
PS Disclosure; Page 153; 160pp; English.  
XX  
XX This is a mutant OP-1 construct, designated H2223, comprising mutations  
XX in the finger 2 subdomain. Novel proteins comprise biologically active  
XX TGF-beta family member fusion proteins competent to refold under suitable  
XX refolding conditions. The fusion proteins comprise: (1) a TGF-beta family  
XX protein C-terminal seven cysteine domain, comprising finger 1, finger 2  
XX and heel subdomains; and (2) a heterologous leader sequence domain  
XX operatively linked to the C-terminal domain. Truncations, heterodimers  
XX and mutants of these fusion proteins and methods of purifying the  
XX heterodimers are also claimed. The TGF-beta family proteins can be used  
XX to induce the full cascade of morphogenic events which culminate in  
XX skeletal tissue formation, including cartilage and endochondral bone  
XX formation. They are useful in the binding of fibrin and fibronectin to  
XX the implanted matrix, chemotaxis of cells, proliferation of fibroblasts,  
XX differentiation into chondroblasts, cartilage formation, vascular  
XX invasion, bone formation, remodeling, and bone marrow differentiation.  
XX The proteins have improved physical properties such as solubility and  
XX stability, improved biological activity, including altered receptor  
XX binding and improved targeting capabilities  
SQ Sequence 139 AA;  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHPKCCAPTQNLNALS 20  
DB 94 INPETHPKCCAPTQNLNALS 113  
RESULT 56  
AAB09547  
ID AAB09547 standard; protein, 139 AA.  
XX  
XX AAB09547;  
XX  
XX 11-SEP-2000 (first entry)  
XX  
XX Mature OP-1 mutant protein H2223, SEQ ID NO:68.  
XX  
XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnery; mutant; mutain.  
XX  
XX Homo sapiens.  
XX  
XX Synthetic.  
XX  
XX WO200020607-A2.  
XX  
XX 13-APR-2000.  
XX  
XX 07-OCT-1999; 99WO-US023371.  
XX  
XX 07-OCT-1998; 98US-0103418P.  
XX  
XX 16-AUG-1999; 99US-00374958.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Oppermann H, Tai M, McCartney J;  
XX  
XX WPI; 2000-303787/26.  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
XX morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
XX tissue and connective tissue and comprises a substitution in a region of  
XX the finger 2 domain.  
PS Claim 51; Page 155; 162pp; English.



PI Cohen CM, Ozkaynak E;  
 DX WPI, 2000-032825/03.  
 XX  
 XX Screening assay useful for identifying compounds which can act to  
 PT modulate expression of a morphogen in a mammalian cell.  
 XX  
 PS Claim 1; Col 35-36; 48pp; English.  
 XX  
 XX The invention provides a method for altering expression of a morphogen in  
 CC a mammalian cell with a compound that modulates morphogen expression in  
 CC epithelial cells identified in an assay for bone formation. The method  
 CC uses a protein that induces endochondral bone formation such as Op-1, a  
 CC morphogenic protein which is a member of the transforming growth factor  
 CC (TGF-beta) superfamily. Other morphogens useful in the invention are  
 CC osteogenic proteins (Op-1, Op-2 and CBMP2) and related proteins such as  
 CC BMP, Vgr-1, GDF-1, and the 60A protein. The method is used as a screening  
 CC assay for identifying compounds which modulate the level of expression of  
 CC a morphogen. The method allows the determination of substances useful in  
 CC therapeutic treatments to modulate (stimulate or depress) morphogen  
 CC expression and/or secretion in disease treatment. Compounds can be  
 CC screened for their ability to modulate the effective systems or local  
 CC concentration of a morphogen. Compounds which can be screened include  
 CC chemicals, biological response molecules such as lymphokines, cytokines,  
 CC hormones or vitamins, plant extracts, microbial broths and extract  
 CC mediums conditioned by eukaryotic cells, body fluids or tissue extracts.  
 CC The assay has few steps and is easy to carry out producing results  
 CC quickly. Drugs which result in cell death are easy to identify. The  
 CC present sequence represents the mature form of the human Op-1  
 XX  
 XX Sequence 139 AA;

		100.0%;	Score 111;	DB 3;	Length 139;
		Pred. No.	6, 1e-07;		
Query Match	Similarity	100.0%;			
Best Local	Similarity	100.0%;			
Matches	Conservative	0;	Mismatches	0;	Gaps
					0
QY	1 INETVPRCCAPTOLNAIS	20			
b	94 INETVPRCCAPTOLNAIS	113			

RESULT	58
AAB02813	
ID	AAB02813 standard; protein, 139 AA.
AC	
AA	AAB02813;
DT	22-AUG-2000 (first entry)
DE	Human mature H2223 mutant amino acid sequence SEQ ID NO:68.
XX	
KW	Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;
KM	bone morphogenic protein; osteogenic protein; mutant; modified;
FT	finger 2 sub-domain; finger 1 domain; heel domain; chimeric protein;
KV	osteogenic; proliferative; antiinflammatory; tissue morphogenesis;
XX	tissue repair; regeneration; proliferation; differentiation.
XX	
OS	Homo sapiens.
CS	Synthetic.
FN	WO200020591-A2.
XX	
PD	13-APR-2000.
XX	
2F	07-OCT-1999; 99WO-US023370.
XX	
PR	07-OCT-1998; 98US-0103418P.
PR	16-AUG-1999; 99US-00374936.
XX	
FA	(STYC ) STRYKER CORP.
XX	
P1	Opfermann H, Tai M, MCCartney J,

DR WPI; 2000-303776/26.

XX Novel TGF-beta superfamily mutant chimeric protein, useful for inducing

PT tissue morphogenesis in e.g. bone, comprises a dimer consisting of one

PT monomer containing domains from two family members.

PS Disclosure; Page 142; 149pp; English.

XX

CC The present invention describes a tumour growth factor beta (TGF-beta)

CC superfamily chimeric protein (I) derived from at least 2 different

CC members of the superfamily comprising a dimer with one monomer that

CC contains a finger 2 domain derived from a first family member and a

CC finger 1 domain and heel domain, both derived from a second family

CC member. The monomer further comprises a conserved C-terminal cysteine

CC skeleton. (II) has osteogenic, proliferative and antiinflammatory

CC activities. The TGF-beta superfamily proteins (I) are useful for

CC inducing tissue morphogenesis (i.e. molecules capable of tissue repair

CC and regeneration and/or inhibiting inflammation) in bone, non-mineralised

CC skeletal tissue, dental tissue, connective tissue, brain, liver and nerve

CC and for inducing the proliferation and differentiation of uncommitted

CC progenitor cells in a tissue-specific manner to support new tissue

CC formation. AAA29897 to AAA29897 and AAB02748 to AAB02824 represent

CC sequences used in the exemplification of the present invention

CC

XX

Sequence 139 AA;

Query Match 100.0%; Score 111; DB 3; Length 139;

Best Local Similarity 100.0%; Pred. No. 6.1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

XX

1 INPETHKPCCAPTOLNAIS 20

94 INPETHKPCCAPTOLNAIS 113

DB

RESULT 59

AA051924

ID AA051924 standard; protein: 139 AA.

XX

AA051924;

DT 01-FEB-2002 (first entry)

XX

DE Human TGFbeta protein superfamily protein BMP7.

XX

Human, TGFbeta; transforming growth factor beta, mutant; antagonist;

XX agonist; ectopic bone formation; psoriasis; muscular atrophy; scar;

XX formation; fibrosis; cirrhosis; osteopathic; antipsoriatic; antifibrotic;

XX hepatotropic; vulnerary; BMP7.

XX

Homo sapiens.

XX

DE10026713-A1.

XX

06-DEC-2001.

XX

30-MAY-2000; 2000DE-01026713.

XX

30-MAY-2000; 2000DE-01026713.

XX

(SEBA/) SEBALD W.

XX

Sebal W, Nickel J;

XX

WPI; 2002-042559/06.

XX

New mutant of transforming growth factor-beta superfamily protein, useful

PT for treating or preventing e.g. ectopic bone formation, competes for

PT receptor binding.

XX

Example 1; Fig 1; 54pp; German.

XX

The present invention relates to mutants of a chain of a protein which,

CC when in the form of a homodimer, has antagonistic or partial agonistic

CC activity, and where the mutation results in the protein binding with low

CC affinity to its receptor. The protein is a member of the transforming

CC growth factor beta (TGFbeta) superfamily. The mutant sequences of the

CC invention can be used in the treatment of diseases associated with the

CC overexpression of TGFbeta family proteins, including ectopic bone

CC formation, psoriasis, muscular atrophy, scar formation, fibrosis and

CC cirrhosis. The present sequence is the human BMP7 protein

XX

XX

Sequence 139 AA;

Query Match 100.0%; Score 111; DB 5; Length 139;

Best Local Similarity 100.0%; Pred. No. 6.1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

XX

1 INPETHKPCCAPTOLNAIS 20

94 INPETHKPCCAPTOLNAIS 113

DB

RESULT 60

AD04098

ID AD04098 standard; protein: 139 AA.

XX

AD04098;

XX

20-MAY-2004 (first entry)

XX

Human protein of the invention SEQ ID NO:2783.

XX

human; gene therapy; diagnostic marker; pharmaceutical.

XX

Homo sapiens.

XX

EP1347046-A1.

XX

24-SEP-2003.

XX

12-APR-2002; 2002EP-00008400.

XX

22-MAR-2002; 2002JP-00137785.

XX

(REAS-) RES ASSOC BIOTECHNOLOGY.

XX

Isogai T, Sugiyama T, Otsuki T, Wakamatsu A, Sato H, Iehii S;

XX Yamamoto J, Isono Y, Hio Y, Otsuka K, Nagai K, Irie R, Tamechika I;

XX Seki N, Yoshikawa T, Otsuka M, Nagahari K, Masuno Y;

XX

WPI; 2003-723558/69.

XX

N-PSDB; AD001655.

XX

New polynucleotides and polypeptides are useful in gene therapy, for

PT developing a diagnostic marker or medicines for regulating their

PT expression and activity, or as a target of gene therapy.

XX

Claim 1; SEQ ID NO 2783; 305pp; English.

XX

The invention relates to a novel human polynucleotide and the encoded

CC polypeptide. A polynucleotide of the invention may have a use in gene

CC therapy. An oligonucleotide of the invention AD06202-AD066773 is useful

CC as a primer for synthesizing the polynucleotide or as a probe for

CC detecting the polynucleotide. The polynucleotides AD001316-AD033758 are

CC useful in gene therapy, for developing a diagnostic marker or medicines

CC for regulating their expression and activity, or as a target of gene

CC therapy. The proteins AD033759-AD066201 encoded by the polynucleotides

CC are useful as pharmaceutical agents. The present sequence represents a

CC protein sequence of the invention.

XX

XX

Sequence 139 AA;

Query Match 100.0%; Score 111; DB 7; Length 139;

Best Local Similarity 100.0%; Pred. No. 6.1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNMS 20  
 DB 94 INPETHKPCCAPTOLNMS 113

RESULT 61  
 ADH11607  
 ID ADH11607 standard; protein: 139 AA.  
 AC ADH11607;  
 XX  
 DT 11-MAR-2004 (first entry)  
 XX

DE Human bone morphogenic protein (BMP) polypeptide #35.  
 KW Human; bone morphogenic protein; BMP; weight gain; appetite suppression;  
 KW fat mass reduction; cell sensitivity; glucose uptake; diabetes;  
 KW insulin resistance; hyperglycemia; hypertension;  
 KW coronary artery disease; renal failure; neuropathy; metabolic disorder;  
 KW glucose metabolism disorder; endocrine disorder; obesity; weight loss;  
 KW liver disorder; cartilage growth disorder; bone growth disorder;  
 KW inflammation; aberrant cell growth; liver cancer.  
 KM  
 XX  
 OS Homo sapiens.  
 XX  
 PN US2003224501-A1.  
 XX  
 PD 04-DEC-2003.  
 XX  
 PF 14-FEB-2003; 2003US-00365345.  
 XX  
 PR 17-MAR-2000; 2000US-0190067P.  
 PR 16-MAR-2001; 2001US-00809269.  
 PR 23-MAR-2001; 2001WO-US009229.  
 PR 17-JAN-2002; 2002US-0348621P.  
 PR 22-JAN-2002; 2002US-0349356P.  
 PR 28-JAN-2002; 2002US-0351520P.  
 PR 06-FEB-2002; 2002US-0354265P.  
 PR 15-FEB-2002; 2002US-0356749P.  
 PR 16-JAN-2003; 2003US-00345236.  
 XX  
 PA (YOUNG/) YOUNG P E.  
 PA (RUBEN/) RUBEN S M.  
 XX  
 PI Young PE, Ruben SM;  
 XX  
 DR WPI; 2004-022075/02.  
 XX

PT New bone morphogenic protein polypeptides and polynucleotides, useful for  
 PT diagnosing, preventing, treating or ameliorating a medical condition,  
 PT e.g. diabetes, dyslipidemia, hypertension, coronary artery disease or  
 PT neuropathy.  
 XX  
 PS Claim 1; SEQ ID NO 63; 224pp; English.  
 XX

CC The invention relates to human bone morphogenic protein (BMP)  
 CC polypeptides and the polynucleotides encoding them. The invention also  
 CC relates to a method for limiting weight gain, suppressing appetite or  
 CC reducing fat mass, comprising administering to a mammalian subject a  
 CC therapeutic amount of a BMP polypeptide, and a method for increasing the  
 CC sensitivity of a cell to insulin or increasing glucose uptake by a cell,  
 CC comprising contacting the cell with a BMP polypeptide. The BMP  
 CC polypeptides and polynucleotides are useful for diagnosing a pathological  
 CC condition or a susceptibility to a pathological condition in a subject or  
 CC for preventing, treating or ameliorating a medical condition, e.g.  
 CC diabetes, insulin resistance, hyperglycemia, hypertension, coronary  
 CC artery disease, renal failure, neuropathy, metabolic disorders, glucose  
 CC metabolism disorder, endocrine disorders, obesity, weight loss, liver  
 CC disorders, cartilage and bone growth disorders, inflammation or aberrant  
 CC cell growth such as liver cancer. The BMP polypeptides and  
 CC polynucleotides are also useful for regulating nutritional partitioning,  
 CC limiting weight gain, suppressing appetite, reducing fat mass, increasing

CC the sensitivity of a cell to insulin or increasing glucose uptake by a  
 CC cell. This sequence represents a human BMP polypeptide of the invention.  
 XX

XX Sequence 139 AA;  
 SQ

Query Match 100.0%; Score 111; DB 8; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNMS 20  
 DB 94 INPETHKPCCAPTOLNMS 113

RESULT 62  
 ADK90626  
 ID ADK90626 standard; protein: 139 AA.  
 XX  
 AC ADK90626;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX

DE Human osteogenic protein 1 morphogen Segid 1.  
 KW human; chronic renal failure; renal disorder; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; morphogen;  
 KW angiotensin-converting enzyme inhibitor; ACE;  
 KW angiotensin II receptor antagonist; AlIRA; end-stage renal disease; ESRD;  
 KW chronic diabetic nephropathy; diabetic glomerulopathy;  
 KW diabetic renal hypertrophy; hypertensive nephrosclerosis;  
 KW hypertensive glomerulosclerosis; chronic glomerulonephritis;  
 KW hereditary nephritis; renal dysplasia; antidiabetic; nephrotropic;  
 KW antiinflammatory; vasotrophic.  
 KM  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO2004019876-A2.  
 XX  
 PD 11-MAR-2004.  
 XX  
 PF 29-AUG-2003; 2003WO-US026923.  
 XX  
 PR 28-AUG-2002; 2002US-0406431F.  
 XX  
 PA (CURT-) CURTIS INC.  
 PA (UNITW) UNITV WASHINGTON.  
 XX  
 PI Charette MF, Hruska KA, McCartney J;  
 XX  
 DR WPI; 2004-282635/26.  
 XX

PT Treating or preventing chronic renal failure in mammal, comprises  
 PT conjointly administering osteogenic proteins/bone morphogenic proteins  
 PT morphogen and angiotensin-converting enzyme inhibitor to mammal.  
 XX  
 PS Disclosure; SEQ ID NO 1; 365pp; English.  
 XX

CC This invention relates to a novel method for treating or preventing  
 CC chronic renal failure and other associated mammalian renal disorders.  
 CC Specifically, it refers to conjointly administering osteogenic protein  
 CC (OP) or bone morphogenic protein (BMP) morphogens with an angiotensin-  
 CC converting enzyme (ACE) inhibitor, in particular the angiotensin II  
 CC receptor antagonist/ blocker (AlIRA). The present invention describes  
 CC using these compositions as inducers of proliferation and differentiation  
 CC of renal tissue, and as such can be used to prevent, inhibit, delay or  
 CC alleviate the progressive loss of renal function and the decline in  
 CC glomerular filtration rate (GFR) characterised by chronic renal failure.  
 CC Furthermore, they can be useful for treating conditions such as end-stage  
 CC renal disease (ESRD), chronic diabetic nephropathy, diabetic  
 CC glomerulopathy, diabetic renal hypertrophy, hypertensive nephrosclerosis,  
 CC hypertensive glomerulosclerosis, chronic glomerulonephritis, hereditary  
 CC nephritis and renal dysplasia where the mammal is a kidney transplant  
 CC recipient. Accordingly, compositions exhibit antidiabetic, nephrotropic,

CC antiinflammatory and vasotropic activities. This polypeptide sequence is  
 CC a human osteogenic protein 1 of the invention.  
 XX  
 SO Sequence 139 AA;  
 Query Match 100.0%; Score 111; DB 8; Length 139;  
 Best Local Similarity 100.0%; Pred. No. 6.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHPKPCCAPTQLNAIS 20  
 |||  
 DB 94 INPETHPKPCCAPTQLNAIS 113  
 |||  
 RESULT 63  
 ADK72628  
 ID ADK72628 standard; protein, 141 AA.  
 XX  
 AC ADK72628;  
 XX  
 DT 06-MAY-2004 (first entry)  
 XX  
 DE rh BMP-7 mature peptide.  
 XX  
 KW human bone morphogenetic protein-7 mature peptide dimer;  
 KW rh BMP-7 mature peptide.  
 XX  
 OS Homo sapiens.  
 XX  
 PN CN1412200-A.  
 XX  
 PD 23-APR-2003.  
 XX  
 PF 12-OCT-2001; 2001CN-00135658.  
 XX  
 PR 12-OCT-2001; 2001CN-00135658.  
 XX  
 PA (GENE-) INST GENE TECHNOLOGY HANGZHOU HUADONG ME.  
 XX  
 PI Xu F, Zheng Z;  
 XX  
 DR WPI; 2004-000155/01.  
 DR N-PsDB; ADK72627.  
 XX  
 PT Method for preparing recombinant human bone morphogenetic protein-7  
 PT mature peptide dimer.  
 XX  
 PS Claim 1; SEQ ID NO 2; 11pp; Chinese.  
 XX  
 CC The present invention relates to preparing recombinant human bone  
 CC morphogenetic protein-7 mature peptide dimer. The present sequence  
 CC represents rh BMP-7 mature peptide.  
 XX  
 SO Sequence 141 AA;  
 Query Match 100.0%; Score 111; DB 8; Length 141;  
 Best Local Similarity 100.0%; Pred. No. 6.2e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHPKPCCAPTQLNAIS 20  
 |||  
 DB 95 INPETHPKPCCAPTQLNAIS 114  
 |||  
 RESULT 64  
 AAM29295  
 ID AAM29295 standard; protein, 161 AA.  
 XX  
 AC AAM29295;  
 XX  
 DT 20-APR-1998 (first entry)  
 XX  
 DE Human osteogenic protein subunit D linked to pel B protein product.

XX Bactericidal/permeability increasing peptide; BPI; fusion protein;  
 KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;  
 KW fungicidal; recombinant DNA; vector.  
 XX  
 OS Synthetic.  
 OS Pectobacterium carotovorum.  
 OS Homo sapiens.  
 OS Chimeric.  
 XX  
 PN WO9735009-A1.  
 XX  
 PD 25-SEP-1997.  
 XX  
 PF 18-MAR-1997; 97WO-US005287.  
 XX  
 PR 22-MAR-1996; 96US-00621803.  
 XX  
 PA (XOMA ) XOMA CORP.  
 XX  
 PI Better MD;  
 XX  
 DR WPI; 1997-480215/44.  
 DR N-PsDB; AAT86333.  
 XX  
 PT Recombinant production of bactericidal/permeability increasing protein -  
 PT by expression as a fusion protein in microbial host cells, then cleaving  
 PT the BPI peptide from the carrier.  
 XX  
 PS Example 1; Page 146-147; 186pp; English.  
 XX  
 CC A new recombinant DNA vector construct has been developed which encodes a  
 CC fusion protein and is suitable for introduction into a bacterial host.  
 CC The vector comprises: (a) DNA encoding at least one cationic  
 CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a  
 CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site  
 CC located between (a) and (b). The present sequence represents a human  
 CC osteogenic protein subunit D linked to pel B protein product, used in an  
 CC example in the present invention. The peptides have many uses including  
 CC the treatment of bacterial and fungal infections. BPI peptides also bind  
 CC to endotoxins and heparin, neutralising their effects. The peptides have  
 CC further been shown to inhibit angiogenesis (partly due to heparin-binding  
 CC activity). The fusion proteins have been found to be expressed in large  
 CC amounts without significant proteolysis, and in some cases are actually  
 CC secreted from the host cells. This allows the indirect production of anti-  
 CC microbial BPI peptides in microbial hosts  
 XX  
 SO Sequence 161 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 161;  
 Best Local Similarity 100.0%; Pred. No. 7.1e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETHPKPCCAPTQLNAIS 20  
 |||  
 DB 116 INPETHPKPCCAPTQLNAIS 135  
 |||  
 RESULT 65  
 AAB18757  
 ID AAB18757 standard; protein, 161 AA.  
 XX  
 AC AAB18757;  
 XX  
 DT 22-JAN-2001 (first entry)  
 XX  
 DE Subunit D of human osteogenic protein linked to a pelB leader sequence.  
 XX  
 KW Fusion protein expression; bactericidal permeability-increasing protein;  
 KW BPI; antimicrobial; endotoxin binding agent; neutralizing agent;  
 KW subunit D; osteogenic protein.  
 XX  
 OS Synthetic.

```

OS Pectobacterium carotovorum.
XX Homo sapiens.
XX
XX Key Location/Qualifiers
FH Peptide 1..22
FT /note= "pe1B leader sequence from the pectate lyase gene
FT of Erwinia carotovora"
FT 23..161
FT Protein /note= "subunit D of human osteogenic protein"
XX
XX WO200055322-A1.
XX
XX 21-SEP-2000.
XX
XX 17-MAR-2000; 2000WO-US007148.
XX
XX 18-MAR-1999; 99US-00271970.
XX
XX (XOMA ) XOMA TECHNOLOGY LTD.
XX
XX Better MD, Gavit PD;
XX
XX WI1; 2000-602118/57.
XX
XX N-PSDB; AAA75797.
XX
XX Improved production of recombinant peptides from bacterial cells involves
XX treating bacterial cells with acid to disrupt or lyse the cells and
XX release the peptide from fusion protein.
XX
XX Example 1; Page 38-39; 53pp; English.
XX
XX The specification describes an improved method for obtaining a peptide
XX from bacterial cells after fusion protein expression in the cells. The
XX method comprises treating the bacterial cells with acid to disrupt or
XX lyse the cells and release the peptide from fusion protein, in a single
XX step. The fusion protein comprises the peptide, and a carrier protein,
XX with an acid-cleavable site between them. The method is useful for
XX obtaining recombinant peptides such as bactericidal permeability-
XX increasing protein (BPI)-derived peptides from bacterial cells. BPI-
XX derived peptides having the activity of BPI are useful as antimicrobial
XX agents, as endotoxin binding and neutralizing agents. The present
XX sequence represents subunit D of a human osteogenic protein. It is linked
XX to a peptide derived from BPI, and the construct used to produce vectors
XX for use in the method of the invention
XX
XX Sequence 161 AA;
XX
XX Query Match: 100.0%; Score 111; DB 3; Length 161;
XX Best Local Similarity 100.0%; Pred. No. 7.1e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHPKCCAPTOLNAIS 20
XX |||||
XX 116 INPETHPKCCAPTOLNAIS 135
XX
XX RESULT 66
XX ID AAR44749
XX AC AAR44749;
XX
XX 25-MAR-2003 (revised)
XX DT 01-JUL-2002 (revised)
XX DT 06-JUN-1994 (first entry)
XX
XX Osteogenic fusion protein OPLA.
XX
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;
XX vascularisation; mineralisation; differentiation; ss.
XX
XX Homo sapiens.
XX

```

FT	Key	Location/Qualifiers
FT	Region	1..60
FT		/label= Leader sequence.
FT	Region	63..169
FT		/note= "Substantial fragment of the OPl mature protein."
XX	PV	US5266683-A.
XX	PD	30-NOV-1993.
XX	PF	21-FEB-1992;
XX	PR	92US-00841646.
XX	PR	08-APR-1988;
XX	PR	15-AUG-1988;
XX	PR	23-FEB-1989;
XX	PR	17-OCT-1989;
XX	PR	22-FEB-1990;
XX	PR	20-AUG-1990;
XX	PR	07-SEP-1990;
XX	PR	18-OCT-1990;
XX	PR	18-OCT-1990;
XX	PR	21-NOV-1990;
XX	PR	04-DEC-1990;
XX	PR	04-DEC-1990;
XX	PR	22-FEB-1991;
XX	PR	20-DEC-1991;
XX	PR	28-JAN-1992;
XX	PA	(STYC ) STRYKER CORP.
XX	PI	Kuberasampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;
XX	DR	WPI; 1993-395405/49.
XX	DR	N-PSTD; AAQ53145.
PT	PT	New pure mammalian osteogenic proteins - induce cartilage and endochondral bone formation when in association with a matrix.
PS	XX	Disclosure; Col 99-100; 128pp. English.
XX	XX	The fusion protein comprises substantially all of the mature form of OPl (AAR44746; residues 328-431) linked by an Asp-Pro cleavage site to a leader sequence suitable for promoting expression in E. coli. The protein when in association with a matrix can induce at the locus of an implant the full development cascade of endochondral bone formation including vascularisation, mineralization and bone marrow differentiation. The osteogenic protein can also be used to repair both bone and cartilage in the treatment of osteoarthritis. (Updated on 01-01U-2002 to add missing PA field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)
SQ	Sequence	169 AA;
Query Match	Similarity	100.0%; Score 111; DB 2; Length 169;
Best Local	Similarity	100.0%; Prid. No. 7,4e-07;
Matches	20; Conservative	0; Mismatches 0; Indels 0; Gaps 0;
Oy	1	INPETVPKCCAPTQLNAIS 20       
Db	124	INPETVPKCCAPTQLNAIS 143
RESULT 67	AAR85765	
ID	AAR85765	standard; protein; 169 AA.
XX	AAR85765;	
XX	AC	
DT	25-MAR-2003	(revised)
DT	20-JUN-1996	(first entry)
XX	XX	OPlA fusion protein encoded by OPl(a) cDNA.

XX	Human; osteogenic protein; hOP-1; murine; mOP-1; TGF-beta superfamily;
KW	transforming growth factor-beta; dimer; antibody; epitope; hippocampus;
KW	purification; implantable osteogenic device; bone formation; craniofacial
KW	anomaly; skeletal; dental; endochondral bone formation; MLE leader;
KW	non-union fracture; cartilage repair; osteoarthritis.
XX	
OS	Homo sapiens.
OS	Escherichia coli.
XX	
FT	Key
FT	Location/Qualifiers
FT	Peptide
FT	1..60
FT	/note="MLE leader peptide"
FT	61..62
FT	Cleavage-site
FT	/note="Asp-Pro acid cleavage site"
FT	Misc-difference 63
FT	/note="Probably included due to a cloning anomaly"
FT	Protein
FT	64..169
FT	/note="Residues 326-431 of hOP-1"
XX	
XX	US5468845-A.
XX	
PD	21-NOV-1995.
XX	
EP	01-NOV-1993; 93US-00147023.
XX	
PR	08-APR-1988; 88US-00179406.
PR	15-AUG-1988; 88US-00232630.
PR	23-FEB-1989; 89US-00315342.
PR	17-OCT-1989; 89US-00422613.
PR	17-OCT-1989; 89US-00422699.
PR	22-FEB-1990; 90US-00483913.
PR	20-AUG-1990; 90US-00569920.
PR	07-SEP-1990; 90US-00579865.
PR	18-OCT-1990; 90US-00599543.
PR	18-OCT-1990; 90US-00600024.
PR	21-NOV-1990; 90US-00616374.
PR	04-DEC-1990; 90US-00621849.
PR	04-DEC-1990; 90US-00621988.
PR	22-FEB-1991; 91US-00660162.
PR	20-DEC-1991; 91US-00810560.
PR	28-JAN-1992; 92US-00827052.
PR	21-FEB-1992; 92US-00841646.
XX	
PA	(STYC ) STRYKER CORP.
XX	
P1	Rueger DC, Kuberasampath T, Oppermann H, Ozkaymak E;
XX	
DR	WPI; 1996-010159/01.
DR	N-PSDB; AAT02605.
XX	
PT	Antibodies with osteogenic protein binding specificity - used in
PT	purification of osteogenic proteins, and as antigenic proteins.
XX	
PS	Disclosure; Col 99-100; 129pp; English.
XX	
CC	The sequences given in AAR85765-70 represent fusion proteins comprising
CC	fragments of human osteogenic protein. The MLE leader sequence is
CC	suitable for promoting expression in E. coli. The genes were expressed in
CC	E. coli under the control of a synthetic T1P promoter-operator to produce
CC	synthetic inclusion bodies. Constructs containing the Asp-Pro site were
CC	cleaved with acid. The resulting products were purified, refolded and
CC	allowed to dimerize. The proteins had osteogenic activity when properly
CC	folded and dimerized. Antisera were produced against the purified
CC	proteins. The resulting antibodies had binding specificities for
CC	osteogenic proteins. The antibodies are capable of binding specifically
CC	to an epitope of the osteogenic protein and may be used in purification
CC	protocols. Osteogenic proteins, such as these, may be used in an
CC	implantable osteogenic device which allows predictable bone formation to
CC	correct acquired and congenital craniofacial and other skeletal or dental
CC	anomalies. They may be used to induce local endochondral bone formation
CC	in non-union fractures and in other clinical applications including
CC	dental and periodontal applications where bone formation is required.

XX	Sequence 169 AA;
Dy	Query Match
	Best Local Similarity 100.0%; Score 111; DB 2; Length 169;
Db	Matches 20; Conservative 0; Mismatches 0; Indels 0; Caps 0
	1 INPEIVPKPCAPPTOLNALS 20 
ID	124 INPEIVPKPCAPPTOLNALS 143
RESULT 68	
AAW44305	AAW44305 standard; protein; 169 AA.
AC	AAW44305;
DT	27-MAY-1998 (First entry)
DE	Human osteogenic fusion protein OPLA.
KW	Human; osteogenic fusion protein; subunit; endochondral bone formation; dimeric; recombinant protein.
OS	Synthetic.
XX	Homo sapiens.
FN	US5714589-A.
PD	03-FEB-1998.
PF	23-MAY-1995; 9SUS-00447570.
PR	08-APR-1988; 8BUS-00179406. 15-AUG-1988; 8BUS-00232630. 23-FEB-1989; 8BUS-00315342. 17-OCT-1989; 8BUS-00422613. 17-OCT-1989; 8BUS-00422699. 22-FEB-1990; 9OUS-00483913. 20-AUG-1990; 9OUS-00569920. 07-SEP-1990; 9OUS-00579865. 18-OCT-1990; 9OUS-00599543. 18-OCT-1990; 9OUS-00600024. 21-NOV-1990; 9OUS-00616374. 04-DEC-1990; 9OUS-00621849. 04-DEC-1990; 9OUS-00621988. 22-FEB-1991; 9IUS-00660162. 20-DEC-1991; 9IUS-00810560. 28-JAN-1992; 9ZUS-00827052. 21-FEB-1992; 9ZUS-00841646. 01-NOV-1993; 9JUS-00147023.
PA	(STYC ) STRYKER CORP.
PI	Pang RHL, Rueger DC, Kuberakaampath T, Oppermann H, Ozkaynak E;
XX	WP1, 1998-158353/14.
DR	N-PSDB; AAV15208.
PT	Extraction of osteogenic protein from mixture - using antibodies specific for novel polypeptide chains useful as subunit(s) of dimeric osteogenic protein(s).
PS	Disclosure, Col 97-98; 127PP; English.
CC	The present sequence represents a human osteogenic fusion protein, which is used in the present invention. The present invention describes methods for selectively extracting an osteogenic protein (OP) from a mixture. The method comprises: (a) exposing the mixture to an antibody that

CC specifically binds OP, separating the resulting antibody-protein complex  
 CC from the mixture, and dissociating the complex. In the methods OP  
 CC comprises a pair of oxidised subunits that are disulphide-bonded to form  
 CC a dimer, and one of the subunits has an amino acid (aa) sequence  
 CC sufficiently homologous to residues 335-431 of a 431 aa protein  
 CC designated OPs, sequence given in the specification. In dimeric form OP  
 CC is capable of inducing cartilage and endochondral bone formation in a  
 CC mammal when disposed within a matrix implanted in the mammal. The methods  
 CC are used for recovering the recombinant proteins from cell cultures  
 XX

SQ Sequence 169 AA;

Query Match 100.0%; Score 111; DB 2; Length 169;

Best Local Similarity 100.0%; Pred. No. 7.4e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INBETVPRCCAPTQNLN1S 20  
 DB 124 INBETVPRCCAPTQNLN1S 143

RESULT 69

AAW89682  
 ID AAW89682 standard; protein; 169 AA.

XX AAW89682;

AC 20-MAR-2003 (revised)

DT 24-MAR-1999 (first entry)

XX Osteogenic fusion protein OP1A.

XX Human; osteogenic protein; OP-1; OPX; endochondral bone formation;  
 XX cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 XX non-union fracture; osteoarthritis; vascularisation; mineralisation;  
 XX bone marrow differentiation.

XX Homo sapiens.

OS Synthetic.

XX US5863758-A.

PN 26-JAN-1999.

PD 23-MAY-1995; 95US-00449700.

XX 08-APR-1988; 88US-00179406.

XX 15-AUG-1988; 88US-00232630.

XX 23-FEB-1989; 89US-00315342.

XX 17-OCT-1989; 89US-00422613.

XX 22-FEB-1990; 90US-00463913.

XX 20-AUG-1990; 90US-00569920.

XX 07-SEP-1990; 90US-00579865.

XX 18-OCT-1990; 90US-00600024.

XX 21-NOV-1990; 90US-00616374.

XX 04-DEC-1990; 90US-00621849.

XX 22-FEB-1991; 91US-00660162.

XX 20-DEC-1991; 91US-00810560.

XX 28-JAN-1992; 92US-00827052.

XX 21-FEB-1992; 92US-00841646.

XX 01-NOV-1993; 93US-00147023.

XX (STYC) STRYKER CORP.

XX Pang RHL, Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;

XX WPI; 1999-131303/11.

XX N-PSDB; AAX00233.

XX Nucleic acid encoding mammalian osteogenic proteins in prepro form - able

PT to induce cartilage and bone formation when implanted in matrix; useful  
 PT for repairing bone defects.

PS Disclosure; Col 97-98; 127pp; English.

XX The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis; or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents an osteogenic fusion protein OP1A. (Updated  
 CC on 20-MAR-2003 to correct PA field.)

SQ Sequence 169 AA;

Query Match 100.0%; Score 111; DB 2; Length 169;

Best Local Similarity 100.0%; Pred. No. 7.4e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INBETVPRCCAPTQNLN1S 20  
 DB 124 INBETVPRCCAPTQNLN1S 143

RESULT 70

AAW43116  
 ID AAW43116 standard; protein; 169 AA.

XX AAW43116;

AC 16-DEC-1999 (first entry)

DT Osteogenic protein OP1A fusion protein sequence.

XX Chondrogenic protein; biodegradable matrix; cell proliferation;  
 XX cell differentiation; migratory progenitor cell; cartilage formation;  
 XX allogenic implant; xenogenic implant; endochondral bone formation;  
 XX osteogenic protein.

XX Synthetic.

OS US5958441-A.

XX 28-SEP-1999.

XX 24-MAY-1995; 95US-00449699.

XX 08-APR-1988; 88US-00179406.

XX 15-AUG-1988; 88US-00232630.

XX 23-FEB-1989; 89US-00315342.

XX 17-OCT-1989; 89US-00422613.

XX 22-FEB-1990; 90US-00463913.

XX 20-AUG-1990; 90US-00569920.

XX 07-SEP-1990; 90US-00579865.

XX 18-OCT-1990; 90US-00600024.

XX 21-NOV-1990; 90US-00616374.

XX 04-DEC-1990; 90US-00621849.





XX PF 24-OCT-1997; 97US-00957425.

XX PR 08-APR-1988; 88US-00179406.

XX PR 15-AUG-1988; 88US-00232630.

XX PR 23-FEB-1989; 89US-00315342.

XX PR 17-OCT-1989; 89US-00422613.

XX PR 17-OCT-1989; 89US-00422699.

XX PR 22-FEB-1990; 90US-00483913.

XX PR 20-AUG-1990; 90US-00568920.

XX PR 18-OCT-1990; 90US-0059543.

XX PR 18-OCT-1990; 90US-00600024.

XX PR 21-NOV-1990; 90US-00616374.

XX PR 04-DEC-1990; 90US-00621988.

XX PR 22-FEB-1991; 91US-00660162.

XX PR 20-DEC-1991; 91US-00810560.

XX PR 28-JAN-1992; 92US-00827052.

XX PR 21-FEB-1992; 92US-00841646.

XX PR 22-DEC-1992; 92US-00993545.

XX PR 01-NOV-1993; 93US-00147023.

XX PR 23-MAY-1995; 95US-00447570.

XX PA (OPPE/) OPPERMANN H.

XX PA (OZKA/) OZKAYNAK E.

XX PA (KUBE/) KUBERAAMPATH T.

XX PA (RUEG/) RUEGER D C.

XX PA (PANG/) PANG R H L.

XX PI Oppermann H, Ozkaynak E, Kuberampath T, Rueger DC, Pang RHL;

XX DR WPI; 2004-008898/01.

XX DR P-PSDB; ADE52754.

XX PT Osteogenic device for inducing endochondral bone formation, has

XX PT osteogenic protein comprising a pair of unglycosylated protein chains

XX PT disulfide bonded to produce dimeric species, dispersed within

XX PT biocompatible matrix.

XX PS Disclosure; SEQ ID NO 9; 130pg; English.

XX CC The invention relates to an osteogenic device for implantation in a

XX CC mammal, comprising osteogenic protein (OP) dispersed within a

XX CC biocompatible, in vivo biodegradable matrix, where OP comprises a pair

XX CC (P) of unglycosylated protein chains disulfide bonded to produce dimeric

XX CC species having a conformation so that (P) is capable of inducing

XX CC endochondral bone formation in mammal when disposed in the matrix and

XX CC accessible to the cells. Also included are substantially a pure mammalian

XX CC osteogenic protein (comprising a pair of unglycosylated polypeptide

XX CC chains and capable of inducing endochondral bone formation in association

XX CC with a matrix when implanted in a mammal, where the osteogenic protein

XX CC comprises peptides derived from human or mouse OPI), a DNA sequence

XX CC encoding a protein capable of inducing endochondral bone formation in a

XX CC mammal, a vector comprising the DNA, a host cell harbouring and capable

XX CC of expressing (DNA or vector), an osteogenic protein as defined above

XX CC expressed from recombinant DNA in a host cell, a polypeptide chain useful

XX CC as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable

XX CC of binding specifically to an epitope on the osteogenic proteins. The

XX CC osteogenic device is useful for inducing local cartilage and bone

XX CC formation, for endochondral bone formation in a mammal, for inducing

XX CC cartilage or endochondral bone formation in a mammal, or for inducing

XX CC endochondral bone formation in a non-union fracture in a mammal. The

XX CC osteogenic device is useful for cartilage repair in a mammal, in

XX CC periodontal or dental reconstructive procedures, or in endochondral bone

XX CC reconstructive procedures. The antibody is useful for selectively

XX CC extracting osteogenic protein from a mixture of molecules. The host cell

XX CC is useful for producing a protein by recombinant gene expression. The

XX CC osteogenic proteins are useful to raise monoclonal gene expression. The

XX CC antibodies capable of specifically binding to an epitope of the

XX CC osteogenic protein. The present sequence represents a human osteogenic

XX CC protein as a fusion protein with an E. coli leader sequence for

XX CC heterologous expression. Note: The claims refer to regions of mouse and

XX CC human osteogenic proteins which are functional in the osteogenic device,

```
CC however the authors refer to a DNA SEQ ID number where they really mean
XX to refer to a protein.
SQ Sequence 169 AA;
QY Query Match 100.0%; Score 111; DB 8; Length 169;
Best Local Similarity 100.0%; Pred. No.7,4e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
DB 124 INPETHPKPCCAPTOLNAIS 143
RESULT 73
ADM80493
ID ADM80493 standard; protein; 169 AA.
AC ADM80493;
AD 03-JUN-2004 (first entry)
DE Human osteogenic protein, OP1A.
KW human; osteogenic device; osteogenic protein; OP1A; biocompatible matrix;
KW endochondral bone formation; non-union fracture; cartilage formation;
KW periodontal reconstructive procedure; dental reconstructive procedure;
KW cartilage repair.
XX Homo sapiens.
OS US2003224996-A1.
FN 04-DEC-2003.
PD 17-DEC-2002; 2002US-00321799.
PF 08-APR-1988; 98US-00179406.
PR 15-AUG-1988; 88US-00322630.
PR 28-JAN-1992; 92US-00827052.
PR 21-FEB-1992; 92US-00841646.
PR 01-NOV-1993; 93US-00147023.
PR 24-MAY-1995; 95US-00449699.
PR 04-SEP-1996; 98US-00148925.
PA (STYC ) STRYKER CORP.
PI Opperman H, Ozkaynak E, Kuberanampath T, Rueger DC, Pang RH;
XX WPI; 2004-167144/16.
DR N-PDB; ADM80492.
XX Osteogenic device for implantation in mammal comprising osteogenic
PT protein dispersed within biocompatible matrix; osteogenic protein
PR comprising pair of unglycosylated protein chains, inducing endochondral
PT bone formation.
XX Disclosure; SEQ ID NO 9; 136pp; English.
BS The invention relates to an osteogenic device for implantation in mammal,
XX comprising osteogenic protein dispersed within biocompatible matrix
CC defining pores, differentiation, and proliferation of migratory
CC progenitor cells from body of mammal, improvement where osteogenic
CC protein comprises pair of unglycosylated protein chains disulfide bonded
CC to produce dimeric species capable of inducing endochondral bone
CC formation. The device is useful for inducing endochondral bone formation
CC in a non-union fracture in a mammal, for inducing cartilage or
CC endochondral bone formation in a mammal, for use in periodontal or dental
CC reconstructive procedures, for use in cartilage repair in a mammal, for
CC use in endochondral bone reconstructive procedures. The device is useful
CC for inducing cartilage or endochondral bond formation in a mammal
CC comprising the step of implanting the mammal at a locus accessible to
CC migratory progenitor cells. The device is useful for inducing local
```

CC cartilage bone formation and endochondral bone formation in a non-union  
 CC fracture in a mammal. The antibody capable of binding specifically to the  
 CC osteogenic protein is useful for selectively extracting osteogenic  
 CC protein from a mixture of molecules. The present sequence represents the  
 CC amino acid sequence of the human osteogenic protein, OP1A.  
 XX

SO Sequence 169 AA:

Query Match 100.0%; Score 111; DB 8; Length 169;  
 Best Local Similarity 100.0%; Pred. No. 7.4e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPPTQNLNHS 20  
 |||||  
 Db 124 INPETHKPCCAPPTQNLNHS 143

#### RESULT 74

AA18759  
 ID AAB18759 standard; protein; 178 AA.

XX AAB18759;

DT 22-JAN-2001 (first entry)

XX Fusion of subunit D of human osteogenic protein and BPI peptide.

XX Fusion protein expression; bactericidal permeability-increasing protein;  
 KM BPI; antimicrobial; endotoxin binding agent; neutralizing agent;  
 KM subunit D; osteogenic protein.

XX Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

XX Key Location/Qualifiers

FT Peptide 1..22 /note="palB leader sequence from the pectate lyase gene  
 of *Erwinia carotovora*"

FT Protein 23..161 /note="subunit D of human osteogenic protein"

FT Peptide 162..166 /note="spacer"

FT Peptide 167..178 /note="human BPI derived peptide"

FT WO20005322-A1.

XX 21-SEP-2000.

XX 17-MAR-2000; 2000WO-US007148.

XX 18-MAR-1999; 99US-00271970.

XX (XOMA ) XOMA TECHNOLOGY LTD.

XX Better MD; Gavitt PD;

XX WPI; 2000-602118/57.

XX N-PSDB; AAA75798.

XX Improved production of recombinant peptides from bacterial cells involves  
 PT treating bacterial cells with acid to disrupt or lyse the cells and  
 PT release the peptide from fusion protein.

XX Example 1; Page 41-42; 53pp; English.

XX The specification describes an improved method for obtaining a peptide  
 CC from bacterial cells after fusion protein expression in the cells. The  
 CC method comprises treating the bacterial cells with acid to disrupt or  
 CC lyse the cells and release the peptide from fusion protein, in a single  
 CC step. The fusion protein comprises the peptide, and a carrier protein,  
 CC with an acid-cleavable site between them. The method is useful for

CC obtaining recombinant peptides such as bactericidal permeability-  
 CC increasing protein (BPI)-derived peptides from bacterial cells. BPI-  
 CC derived peptides having the activity of BPI are useful as antimicrobial  
 CC agents, as endotoxin binding and neutralizing agents. The present  
 CC sequence represents fusion protein, comprising subunit D of a human  
 CC osteogenic protein and a human BPI derived peptide. The construct is used  
 CC to produce vectors for use in the method of the invention  
 XX

SO Sequence 178 AA:

Query Match 100.0%; Score 111; DB 3; Length 178;  
 Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPPTQNLNHS 20  
 |||||  
 Db 116 INPETHKPCCAPPTQNLNHS 135

#### RESULT 75

AAW29297  
 ID AAW29297 standard; protein; 179 AA.

XX AAW29297;

DT 20-APR-1998 (first entry)

XX PIN33355 vector construct BPI peptide fusion protein Ser153(BPI).

XX Bactericidal/permeability increasing peptide; BPI; fusion protein;  
 KM bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;  
 KM fungicidal; recombinant DNA; vector.

XX Synthetic.

OS Pectobacterium carotovorum.

OS Homo sapiens.

OS Chimeric.

XX WO9735009-A1.

XX 25-SEP-1997.

XX 18-MAR-1997; 97WO-US005287.

XX 22-MAR-1996; 96US-00621803.

XX (XOMA ) XOMA CORP.

XX Better MD;

XX WPI; 1997-480215/44.

XX N-PSDB; AAT85335.

XX Recombinant production of bactericidal/permeability increasing protein -  
 PT by expression as a fusion protein in microbial host cells, then cleaving  
 PT the BPI peptide from the carrier.

XX Example 1; Page; 186pp; English.

XX A new recombinant DNA vector construct has been developed which encodes a  
 CC fusion protein and is suitable for introduction into a bacterial host.  
 CC The vector comprises: (a) DNA encoding at least one cationic  
 CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a  
 CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site  
 CC located between (a) and (b). The present sequence represents the protein  
 CC from PIN33355 vector construct coding for a BPI fusion protein. The  
 CC peptides have many uses including the treatment of bacterial and fungal  
 CC infections. BPI peptides also bind to endotoxins and heparin,  
 CC neutralising their effects. The peptides have further been shown to  
 CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
 CC proteins have been found to be expressed in large amounts without  
 CC significant proteolysis, and in some cases are actually secreted from the  
 CC host cells. This allows the indirect production of anti-microbial BPI

CC peptides in microbial hosts. N.B. The present sequence is not shown in  
 CC the specification but is derived from SEQ ID NO:257 on pages 158-159, as  
 CC designated on page 23  
 XX  
 SQ Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
 Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 INPETHKPCCAPTOLNAIS 20  
 116 INPETHKPCCAPTOLNAIS 135

RESULT 76  
 AAM29298  
 ID AAM29298 standard; protein; 179 AA.

AC AAM29298;  
 DT 20-APR-1998 (first entry)  
 DE PING3356 vector construct BPI peptide fusion protein Val153(BPI).

XX Bactericidal/permeability increasing peptide; BPI; fusion protein;  
 XX bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;  
 XX fungicidal; recombinant DNA; vector.

OS Synthetic.  
 OS Pectobacterium carotovorum.  
 OS Homo sapiens.  
 OS Chimeric.

XX WO9735009-A1.  
 XX 25-SEP-1997.

XX 18-MAR-1997; 97WO-US005287.  
 XX 22-MAR-1996; 96US-00621803.

XX (XOMA ) XOMA CORP.  
 XX Better MD;

XX WPI; 1997-480215/44.  
 XX N-PSDB; AAT86335.

PT Recombinant production of bactericidal/permeability increasing protein -  
 PT by expression as a fusion protein in microbial host cells, then cleaving  
 PT the BPI peptide from the carrier.  
 XX

PS Example 1; Page; 186pp; English.

XX A new recombinant DNA vector construct has been developed which encodes a  
 CC fusion protein and is suitable for introduction into a bacterial host.  
 CC The vector comprises: (a) DNA encoding at least one cationic  
 CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a  
 CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site  
 CC located between (a) and (b). The present sequence represents the protein  
 CC from PING3356 vector construct coding for a BPI fusion protein. The  
 CC peptides have many uses including the treatment of bacterial and fungal  
 CC infections. BPI peptides also bind to endotoxins and heparin,  
 CC neutralising their effects. The peptides have further been shown to  
 CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
 CC proteins have been found to be expressed in large amounts without  
 CC significant proteolysis, and in some cases are actually secreted from the  
 CC host cells. This allows the indirect production of anti-microbial BPI  
 CC peptides in microbial hosts. N.B. The present sequence is not shown in  
 CC the specification but is derived from SEQ ID NO:257 on pages 158-159, as  
 CC designated on page 23  
 XX

SQ Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
 Best Local Similarity 100.0%; Pred. No. 7.8e-07;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 INPETHKPCCAPTOLNAIS 20  
 116 INPETHKPCCAPTOLNAIS 135

RESULT 77  
 AAM29299  
 ID AAM29299 standard; protein; 179 AA.

AC AAM29299;  
 DT 20-APR-1998 (first entry)  
 DE PING3357 vector construct BPI peptide fusion protein Phe153(BPI).

XX Bactericidal/permeability increasing peptide; BPI; fusion protein;  
 XX bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;  
 XX fungicidal; recombinant DNA; vector.

OS Synthetic.  
 OS Pectobacterium carotovorum.  
 OS Homo sapiens.  
 OS Chimeric.

XX WO9735009-A1.  
 XX 25-SEP-1997.

XX 18-MAR-1997; 97WO-US005287.  
 XX 22-MAR-1996; 96US-00621803.

XX (XOMA ) XOMA CORP.  
 XX Better MD;

XX WPI; 1997-480215/44.  
 XX N-PSDB; AAT86335.

PT Recombinant production of bactericidal/permeability increasing protein -  
 PT by expression as a fusion protein in microbial host cells, then cleaving  
 PT the BPI peptide from the carrier.  
 XX

PS Example 1; Page; 186pp; English.

XX A new recombinant DNA vector construct has been developed which encodes a  
 CC fusion protein and is suitable for introduction into a bacterial host.  
 CC The vector comprises: (a) DNA encoding at least one cationic  
 CC bactericidal/permeability increasing peptide (BPI), (b) DNA encoding a  
 CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site  
 CC located between (a) and (b). The present sequence represents the protein  
 CC from PING3357 vector construct coding for a BPI fusion protein. The  
 CC peptides have many uses including the treatment of bacterial and fungal  
 CC infections. BPI peptides also bind to endotoxins and heparin,  
 CC neutralising their effects. The peptides have further been shown to  
 CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion  
 CC proteins have been found to be expressed in large amounts without  
 CC significant proteolysis, and in some cases are actually secreted from the  
 CC host cells. This allows the indirect production of anti-microbial BPI  
 CC peptides in microbial hosts. N.B. The present sequence is not shown in  
 CC the specification but is derived from SEQ ID NO:257 on pages 158-159, as  
 CC designated on page 23  
 XX

SQ Sequence 179 AA;

Query Match 100.0%; Score 111; DB 2; Length 179;  
 Best Local Similarity 100.0%; Pred. No. 7.8e-07;



```

XX
AC AAB18761;
XX
DT 22-JAN-2001 (first entry)
XX
DE Fusion of subunit D of human osteogenic protein and BPI peptide.
XX
KW Fusion protein expression; bactericidal permeability-increasing protein;
KW BPI; antimicrobial; endotoxin binding agent; neutralizing agent;
KW subunit D; osteogenic protein.
XX
OS Synthetic.
OS Pectobacterium carotovorum.
OS Homo sapiens.
XX
PH Key
FT Peptide
FT Location/Qualifiers
FT 1..22
FT /note= "pelB leader sequence from the pectate lyase gene
FT of Erwina carotovora"
FT 23..161
FT /note= "subunit D of human osteogenic protein"
FT 162..166
FT /note= "spacer"
FT 167..190
FT /note= "human BPI derived peptide"
XX
PN WO20005322-A1.
XX
PD 21-SEP-2000.
XX
PF 17-MAR-2000; 2000WO-US007148.
XX
PR 18-MAR-1999; 99US-00271970.
XX
PA (XOMA ) XOMA TECHNOLOGY LTD.
XX
PI Better MD; Gavitt PD;
XX
DR WPI; 2000-602118/57.
DR N-PSDB; AAT5799.
XX
PT Improved production of recombinant peptides from bacterial cells involves
PT treating bacterial cells with acid to disrupt or lyse the cells and
PT release the peptide from fusion protein.
XX
PS Example 1; Page 45; 53pp; English.
XX
CC The specification describes an improved method for obtaining a peptide
CC from bacterial cells after fusion protein expression in the cells. The
CC method comprises treating the bacterial cells with acid to disrupt or
CC lyse the cells and release the peptide from fusion protein, in a single
CC step. The fusion protein comprises the peptide, and a carrier protein,
CC with an acid-cleavable site between them. The method is useful for
CC obtaining recombinant peptides such as bactericidal permeability-
CC increasing protein (BPI)-derived peptides from bacterial cells. BPI-
CC derived peptides having the activity of BPI are useful as antimicrobial
CC agents, as endotoxin binding and neutralizing agents. The present
CC sequence represents fusion protein, comprising subunit D of a human
CC osteogenic protein and a human BPI derived peptide. The construct is used
CC to produce vectors for use in the method of the invention
XX
SQ Sequence 190 AA;
XX
Query Match 100.0%; Score 111; DB 3; Length 190;
Best Local Similarity 100.0%; Pred. No. 8.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
QY 1 INPETHKPCCAPTQNLNALS 20
DB 116 INPETHKPCCAPTQNLNALS 135
XX
RESULT 81

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```

AAW29304
ID AAW29304 standard; protein; 194 AA.
XX
AC AAW29304;
XX
DT 20-APR-1998 (first entry)
XX
DE BPI peptide fusion protein PIN3353 vector construct protein product.
XX
KW Bactericidal/permeability increasing peptide; BPI; fusion protein;
KW bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;
KW fungicidal; recombinant DNA; vector.
XX
OS Synthetic.
OS Pectobacterium carotovorum.
OS Homo sapiens.
OS Chimeric.
XX
PN WO9735009-A1.
XX
PD 25-SEP-1997.
XX
PF 18-MAR-1997; 97WO-US005287.
XX
PR 22-MAR-1996; 96US-00621803.
XX
PA (XOMA ) XOMA CORP.
XX
PI Better MD;
XX
DR WPI; 1997-480215/44.
DR N-PSDB; AAT86342.
XX
PT Recombinant production of bactericidal/permeability increasing protein -
PT by expression as a fusion protein in microbial host cells, then cleaving
PT the BPI peptide from the carrier.
XX
PS Example 1; Page 155-156; 186pp; English.
XX
CC A new recombinant DNA vector construct has been developed which encodes a
CC fusion protein and is suitable for introduction into a bacterial host.
CC The vector comprises: (a) DNA encoding at least one cationic
CC bactericidal/permeability increasing peptide (BPI); (b) DNA encoding a
CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site
CC located between (a) and (b). The present sequence represents the protein
CC product from PIN3353 vector construct coding for a BPI fusion protein.
CC The peptides have many uses including the treatment of bacterial and
CC fungal infections. BPI peptides also bind to endotoxins and heparin,
CC neutralising their effects. The peptides have further been shown to
CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion
CC proteins have been found to be expressed in large amounts without
CC significant proteolysis, and in some cases are actually secreted from the
CC host cells. This allows the indirect production of anti- microbial BPI
CC peptides in microbial hosts
XX
SQ Sequence 134 AA;
XX
Query Match 100.0%; Score 111; DB 2; Length 194;
Best Local Similarity 100.0%; Pred. No. 8.5e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
QY 1 INPETHKPCCAPTQNLNALS 20
DB 116 INPETHKPCCAPTQNLNALS 135
XX
RESULT 82
AAW29302
ID AAW29302 standard; protein; 195 AA.
XX
AC AAW29302;
XX
DT 20-APR-1998 (first entry)
XX

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```

XX DE BPI peptide fusion protein PING3359 vector construct protein product.
XX XX
XX Bactericidal/permeability increasing peptide: Bpi; fusion protein;
XX Bacterial infection; fungal infection; endotoxin; heparin; angiogenesis;
XX fungicidal; recombinant DNA; vector.
XX OS Synthetic.
XX OS Pectobacterium carotovorum.
XX OS Homo sapiens.
XX OS Chimeric.
XX XX
XX W09735009-A1.
XX XX
XX 25-SEP-1997.
XX XX
XX 18-MAR-1997; 97W0-US005287.
XX XX
XX 22-MAR-1996; 96US-00621803.
XX XX
XX (XOMA ) XOMA CORP.
XX PA
XX PI Better MD;
XX PI WPI: 1997-480215/44.
XX DR N-PSDB; AAT86340.
XX XX
XX Recombinant production of bactericidal/permeability increasing protein -
XX PT by expression as a fusion protein in microbial host cells, then cleaving
XX PT the BPI peptide from the carrier.
XX XX
XX Example 1; Page 165-167; 186pp; English.
XX XX
XX A new recombinant DNA vector construct has been developed which encodes a
XX CC fusion protein and is suitable for introduction into a bacterial host.
XX CC The vector comprises: (a) DNA encoding at least one cationic
XX CC bactericidal/permeability increasing peptide (Bpi); (b) DNA encoding a
XX CC carrier protein, and (c) DNA encoding an amino acid (aa) cleavage site
XX CC located between (a) and (b). The present sequence represents the protein
XX CC product from PING3359 vector construct coding for a Bpi fusion protein.
XX CC The peptides have many uses including the treatment of bacterial and
XX CC fungal infections. Bpi peptides also bind to endotoxins and heparin,
XX CC neutralising their effects. The peptides have further been shown to
XX CC inhibit angiogenesis (partly due to heparin-binding activity). The fusion
XX CC proteins have been found to be expressed in large amounts without
XX CC significant proteolysis, and in some cases are actually secreted from the
XX CC host cells. This allows the indirect production of anti-microbial Bpi
XX CC peptides in microbial hosts
XX XX
XX Sequence 195 AA;
XX SQ
XX Query Match 100.0%; Score 111; DB 2; Length 195;
XX Best Local Similarity 100.0%; Pred. No. 8, 5e-07;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX QY 1 INPETHKPCCAPTQNLNALS 20
XX DB 116 INPETHKPCCAPTQNLNALS 135
XX XX
XX RESULT 83
XX AAR51656
XX ID AAR51656 standard; protein; 317 AA.
XX XX
XX AAR51656;
XX AC
XX XX 25-MAR-2003 (revised)
XX DT 01-JUL-2002 (revised)
XX DT 09-JUN-1995 (first entry)
XX XX
XX Osteogenic fusion protein 1B OP1B.
XX DB Osteogenic protein 1A; OP1B; osteoarthritis; osteogenesis;
XX XX

```

```

XX KM cartilage and endochondrial bone formation; allograft repair;
XX KM periodontal, dental and craniofacial reconstruction;
XX KM non-union fracture repair.
XX XX
XX OS Homo sapiens.
XX XX
XX US5354557-A.
XX XX
XX 11-OCT-1994.
XX XX
XX 18-DEC-1992; 92US-00993387.
XX XX
XX 08-APR-1986; 88US-00179406.
XX PR 15-AUG-1988; 88US-00232630.
XX PR 23-FEB-1989; 89US-00315342.
XX PR 17-OCT-1989; 89US-00422613.
XX PR 17-OCT-1989; 89US-00422699.
XX PR 22-FEB-1990; 90US-00483913.
XX PR 20-AUG-1990; 90US-00569920.
XX PR 07-SEP-1990; 90US-00579865.
XX PR 18-OCT-1990; 90US-00599543.
XX PR 18-OCT-1990; 90US-00600024.
XX PR 21-NOV-1990; 90US-00616374.
XX PR 04-DEC-1990; 90US-00621849.
XX PR 22-FEB-1991; 91US-00660162.
XX PR 20-DEC-1991; 91US-00810560.
XX PR 28-JAN-1992; 92US-00827052.
XX PR 21-FEB-1992; 92US-00841646.
XX XX
XX (STYC ) STRYKER CORP.
XX PA
XX PI Rueger DC, Kuberansampath T, Ozkaynak E, Oppermann H;
XX PI WPI: 1994-324521/40.
XX DR N-PSDB; AAQ72712.
XX XX
XX Implantable device for inducing osteogenesis - comprises porous matrix
XX PT congt. non-glycosylated dimeric, disulphide linked osteogenic protein.
XX PT Disclosure: Col 99-102; 128pp; English.
XX XX
XX AAQ72712 encodes AAR51656 the osteogenic fusion protein 1B (OP1B) which
XX CC includes a MBP leader sequence suitable for promoting expression in E.
XX CC coli. Fragments of the osteogenic unglycosylated polypeptides produced
XX CC can be disulphide bonded to form dimers, which form an essential
XX CC component of an osteogenic protein. This protein is dispersed in a
XX CC biodegradable matrix which can be implanted into a mammalian bone marrow
XX CC cavity; here it can induce local cartilage, bone and endochondrial bone
XX CC formation; and it can also accelerate allograft repair. This implant has
XX CC the advantage of inducing all stages of bone formation and of having a
XX CC higher specific activity than other known biosynthetic materials. The
XX CC implant can be used to repair non-union fractures and cartilage; treat
XX CC osteoarthritis; and aid in periodontal, dental or craniofacial
XX CC reconstruction. (Updated on 01-JUL-2002 to add missing PA field.)
XX CC (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to
XX CC correct PR field.)
XX XX
XX Sequence 317 AA;
XX SQ
XX Query Match 100.0%; Score 111; DB 2; Length 317;
XX Best Local Similarity 100.0%; Pred. No. 1, 4e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX QY 1 INPETHKPCCAPTQNLNALS 20
XX DB 272 INPETHKPCCAPTQNLNALS 291
XX XX
XX RESULT 84
XX AAR85766
XX ID AAR85766 standard; protein; 317 AA.
XX XX

```

AC AAR85766;  
 XX  
 XX 25-MAR-2003 (revised)  
 DT 20-JUN-1996 (first entry)  
 XX  
 XX OPIB fusion protein encoded by OPI(b) cDNA.  
 DE  
 XX Human, osteogenic protein, hOP-1; murine, mOP-1; TGF-beta superfamily;  
 KW transforming growth factor-beta; dimer; antibody; epitope; hippocampus;  
 KW purification; implantable osteogenic device; bone formation; craniofacial;  
 KW anomaly; skeletal; dental; endochondral bone formation; MLE leader;  
 XX non-union fracture; cartilage repair; osteoarthritis.  
 OS Homo sapiens.  
 OS Escherichia coli.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..60  
 FT /note= "MLE leader peptide"  
 FT Misc-difference 61  
 FT /note= "Probably included due to a cloning anomaly"  
 FT Protein 62..317  
 FT /note= "Residues 176-431 of hOP-1, represents pro-hOP-1"  
 XX  
 XX US5468845-A.  
 PD 21-NOV-1995.  
 XX  
 PF 01-NOV-1993; 93US-00147023.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 XX  
 PA (STYC ) STRYKER CORP.  
 PI Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;  
 DR N-PSDB; AAR02606.  
 XX  
 PT WPI; 1996-010159/01.  
 PT Antibodies with osteogenic protein binding specificity - used in  
 PT purification of osteogenic proteins, and as antigenic proteins.  
 XX  
 XX Disclosure; Col 101-104; 129pp; English.  
 XX  
 XX The sequences given in AAR85765-70 represent fusion proteins comprising  
 CC fragments of human osteogenic proteins. The MLE leader sequence is  
 CC suitable for promoting expression in E. coli. The genes were expressed in  
 CC E. coli under the control of a synthetic TTP promoter-operator to produce  
 CC synthetic inclusion bodies. Constructs containing the Asp-Pro site were  
 CC cleaved with acid. The resulting products were purified, refolded and  
 CC allowed to dimerise. The proteins had osteogenic activity when properly  
 CC folded and dimerised. Antisera were produced against the purified  
 CC proteins. The resulting antibodies had binding specificities for  
 CC osteogenic proteins. The antibodies are capable of binding specifically  
 CC to an epitope of the osteogenic protein and may be used in purification  
 CC protocols. Osteogenic proteins, such as these, may be used in an  
 CC implantable osteogenic device which allows predictable bone formation to

CC correct acquired and congenital craniofacial and other skeletal or dental  
 CC anomalies. They may be used to induce local endochondral bone formation  
 CC in non-union fractures and in other clinical applications including  
 CC dental and periodontal applications where bone formation is required.  
 CC Other potential applications include cartilage repair, e.g. in the  
 CC treatment of osteoarthritis. (Updated on 25-MAR-2003 to correct PR  
 CC field.) (Updated on 25-MAR-2003 to correct PR field.)  
 XX  
 XX Sequence 317 AA;  
 QY  
 DB Query Match 100.0%; Score 111; DB 2; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHPRCCAPTOINIS 20  
 DB 272 INPETHPRCCAPTOINIS 291  
 XX  
 XX RESULT 85  
 ID AAM44306  
 XX AAM44306 standard; protein; 317 AA.  
 AC AAM44306;  
 XX  
 DT 27-MAY-1998 (first entry)  
 DT  
 XX  
 DE Human osteogenic fusion protein OPIB.  
 KW Human; osteogenic fusion protein; subunit; endochondral bone formation;  
 KW dimeric; recombinant protein;  
 XX  
 OS Synthetic.  
 OS Homo sapiens.  
 XX  
 XX US5714589-A.  
 PD 03-FEB-1998.  
 XX  
 PF 23-MAY-1995; 95US-00447570.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC ) STRYKER CORP.  
 PI Pang RH, Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;  
 XX  
 XX WPI; 1998-158353/14.  
 DR N-PSDB; AAV15209.  
 XX  
 PT Extraction of osteogenic protein from mixture - using antibodies specific  
 PT for novel polypeptide chains useful as subunit(s) of dimeric osteogenic  
 PT protein(s).  
 XX  
 XX Disclosure; Col 101-102; 127pp; English.  
 PS  
 XX

CC The present sequence represents a human osteogenic fusion protein, which  
 CC is used in the present invention. The present invention describes methods  
 CC for selectively extracting an osteogenic protein (OP) from a mixture. The  
 CC method comprises: (a) exposing the mixture to an antibody that  
 CC specifically binds OP, separating the resulting antibody-protein complex  
 CC from the mixture, and dissociating the complex. In the methods OP  
 CC comprises a pair of oxidised subunits that are disulphide-bonded to form  
 CC a dimer, and one of the subunits has an amino acid (aa) sequence  
 CC sufficiently homologous to residues 335-431 of a 431 aa protein  
 CC designated OPs, sequence given in the specification. In dimeric form OP  
 CC is capable of inducing cartilage and endochondral bone formation in a  
 CC mammal when delivered within a matrix implanted in the mammal. The methods  
 CC are used for recovering the recombinant proteins from cell cultures

XX  
 SQ Sequence 317 AA;

Query Match 100.0%; Score 111; DB 2; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
 |||||  
 DB 272 INPETHKPCCAPTQNLNLS 291

RESULT 86  
 AAW89683  
 ID AAW89683 standard; protein; 317 AA.  
 AC AAW89683;  
 XX  
 XX 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 XX  
 DE Osteogenic fusion protein OP1B.  
 XX  
 KW Human; osteogenic protein; OP-1; OPx; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vascularisation; mineralisation;  
 KW bone marrow differentiation.

XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US5863758-A.  
 XX  
 XX 26-JAN-1999.  
 PD  
 XX  
 PF 23-MAY-1995; 95US-00449700.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 18-OCT-1990; 90US-00616374.  
 PR 21-NOV-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 XX (STYC) STRYKER CORP.  
 XX  
 PI Pang RHL, Rueger DC, Kuberasampath T, Oepfermann H, Ozkaynak E,  
 XX

DR WPI, 1999-131303/11.  
 DR N-PSDB; AAX00234.  
 XX  
 XX Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.

PS Disclosure; Col 99-102; 127pp; English.

XX  
 XX The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (Op1-PP), murine Op1-PP, murine Op2-PP or human Op2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-Op1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature Op1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hop1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature Op1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents an osteogenic fusion protein OP1B. (Updated  
 CC on 20-MAR-2003 to correct PA field.)

XX  
 SQ Sequence 317 AA;

Query Match 100.0%; Score 111; DB 2; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
 |||||  
 DB 272 INPETHKPCCAPTQNLNLS 291

RESULT 87  
 AAY43117  
 ID AAY43117 standard; protein; 317 AA.  
 AC AAY43117;  
 XX  
 XX 16-DEC-1999 (first entry)  
 DT  
 XX  
 DE Osteogenic protein OP1B fusion protein sequence.  
 XX  
 KW Chondrogenic protein; biodegradable matrix; cell proliferation;  
 KW cell differentiation; migratory progenitor cell; cartilage formation;  
 KW allogenic implant; xenogenic implant; endochondral bone formation;  
 KW osteogenic protein.

XX  
 OS Synthetic.  
 OS  
 XX  
 PN US5958441-A.  
 XX  
 XX 28-SEP-1999.  
 PD  
 XX  
 PF 24-MAY-1995; 95US-00449699.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 17-OCT-1989; 89US-00483913.  
 PR 22-FEB-1990; 90US-00569920.  
 PR 20-AUG-1990; 90US-00579865.  
 PR 07-SEP-1990; 90US-00579865.



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PR 18-OCT-1990; 90US-00599543.
PR 18-OCT-1990; 90US-00600024.
PR 21-NOV-1990; 90US-00616374.
PR 04-DEC-1990; 90US-00621849.
PR 04-DEC-1990; 90US-00621988.
PR 22-FEB-1991; 91US-00660162.
PR 20-DEC-1991; 91US-00810560.
PR 28-JAN-1992; 92US-00827052.
PR 21-FEB-1992; 92US-00841646.
PR 22-DEC-1992; 92US-00995345.
PR 01-NOV-1993; 93US-00147023.
PA (STYC ) STRYKER BIOTECH CORP.
XX
XX Rueger DC, Pang RHL, Kuberasampath T, Ozkaynak E, Oppermann H;
PI WPI; 1999-589530/50.
DR N-PSDB; AA227585.
XX
XX Implant for mammals permitting the influx, proliferation and
PT differentiation of migratory progenitor cells, useful for inducing
PT endochondral bone formation in mammals.
XX
PS Disclosure; Col 97-100; 127pp; English.
XX
XX This sequence is an osteogenic protein 1B (OP1B) fusion protein. The
CC invention relates to a device for implantation in a mammal comprising a
CC chondrogenic protein (I) dispersed within a biocompatible, in vivo
CC degradable matrix defining pores which permits the influx, proliferation
CC and differentiation of migratory progenitor cells, where (I) comprises a
CC substantially pure protein with the amino acid sequence VPPCCAPT, which
CC is capable of inducing cartilage formation. The device is used as an
CC allogenic or xenogenic implant for the induction endochondral bone
CC formation in mammals
XX
SQ Sequence 317 AA;
Query Match 100.0%; Score 111; DB 2; Length 317;
Best Local Similarity 100.0%; Pred. No. 1.4e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
CY 1 INPETYKPCCAPTOLNAIS 20
DB 272 INPETYKPCCAPTOLNAIS 291

RESULT 88
ADJ62686
ID ADJ62686 standard; protein; 317 AA.
XX
XX ADJ62686;
AC
XX 06-MAY-2004 (first entry)
DT
XX
XX Human osteogenic protein 1B, OP1B.
DE
XX
XX human; osteogenic protein 1B; OP1B; osteogenic device;
KW endochondral bone formation; bone repair; cartilage repair;
KW vascularisation; mineralisation; bone marrow differentiation.
XX
XX Homo sapiens.
OS
XX
XX US6551995-B1.
AC
XX
XX 22-APR-2003.
PD
XX
XX 04-SEP-1998; 98US-00148925.
PF
XX
XX 08-APR-1988; 88US-00179406.
PR 15-AUG-1988; 88US-00232630.
PR 23-FEB-1989; 89US-00315342.
PR 17-OCT-1989; 89US-00422613.
PR 17-OCT-1989; 89US-00422623.

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PR 17-OCT-1989; 89US-00422699.
PR 22-FEB-1990; 90US-00483913.
PR 20-AUG-1990; 90US-00589920.
PR 07-SEP-1990; 90US-00579865.
PR 18-OCT-1990; 90US-00599543.
PR 18-OCT-1990; 90US-00600024.
PR 21-NOV-1990; 90US-00616374.
PR 04-DEC-1990; 90US-00621988.
PR 22-FEB-1991; 91US-00660162.
PR 20-DEC-1991; 91US-00810560.
PR 28-JAN-1992; 92US-00827052.
PR 21-FEB-1992; 92US-00841646.
PR 01-NOV-1993; 93US-00147023.
PR 24-MAY-1995; 95US-00449699.
PA (STYC ) STRYKER CORP.
XX
XX Oppermann H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;
PI WPI; 2003-575998/54.
DR N-PSDB; ADJ62685.
XX
XX Osteogenic device useful for inducing endochondral bone formation in
PT mammals, comprises ceramic or biodegradable non-collagen polymer matrix
PT containing substantially pure natural-sourced mammalian osteogenic
PT protein.
XX
PS Disclosure; SEQ ID NO 11; 127pp; English.
XX
XX The invention relates to an osteogenic device for implantation in a
CC mammal, comprising a ceramic or biodegradable non-collagen polymer matrix
CC defining pores of a dimension sufficient to permit influx,
CC differentiation and proliferation of migratory progenitor cells from the
CC body of mammal, and a substantially pure osteogenic protein competent to
CC induce endochondral bone formation when disposed in the matrix and
CC implanted in mammal. The device is useful for producing endochondral bone
CC formation in mammals, for bone and cartilage repair, for inducing the
CC full developmental cascade of endochondral bone formation including
CC vascularisation, mineralisation and bone marrow differentiation at the
CC locus of an implant when implanted in a mammalian body. The device is
CC useful for bone formation in various orthopedic, periodontal and
CC reconstructive procedures. The present sequence represents the amino acid
CC sequence of human osteogenic protein 1B, OP1B.
XX
XX Sequence 317 AA;
Query Match 100.0%; Score 111; DB 7; Length 317;
Best Local Similarity 100.0%; Pred. No. 1.4e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
CY 1 INPETYKPCCAPTOLNAIS 20
DB 272 INPETYKPCCAPTOLNAIS 291

RESULT 89
ADJ62757
ID ADJ62757 standard; protein; 317 AA.
XX
XX ADJ62757;
AC
XX
XX 29-JAN-2004 (first entry)
DT
XX
XX Human osteogenic protein, OP1B fusion.
DE
XX
XX Human; osteogenic protein; OP1; CEMP2A; CEMP2B; osteogenic device;
KW endochondral bone formation; cartilage formation; non-union fracture;
KW cartilage repair; dental reconstructive procedure.
XX
XX Chimeric.
OS
XX Homo sapiens.
OS Escherichia coli.

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XX US2003069401-A1.  
 XX 10-APR-2003.  
 XX 24-OCT-1997; 97US-00957425.  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 22-DEC-1992; 92US-00995345.  
 PR 01-NOV-1993; 93US-00147023.  
 PR 23-MAY-1995; 95US-00447570.  
 XX (OPPE/) OPPERMAN H.  
 PA (OZKA/) OZKAYNAK E.  
 PA (KUBE/) KUBERASAMPATH T.  
 PA (RUEG/) RUEGER D C.  
 PA (PANG/) PANG R H L.  
 PI Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
 XX WPI: 2004-008898/01.  
 DR P-PSDB; ADE52756.  
 XX Osteogenic device for inducing endochondral bone formation, has  
 PT osteogenic protein comprising a pair of unglycosylated protein chains  
 PT disulfide bonded to produce dimeric species, dispersed within  
 PT biocompatible matrix.  
 XX Disclosure; SEQ ID NO 11; 130pp; English.  
 XX The invention relates to an osteogenic device for implantation in a  
 CC mammal, comprising osteogenic protein (OP) dispersed within a  
 CC biocompatible, in vivo biodegradable matrix, where OP comprises a pair  
 CC (P) of unglycosylated protein chains disulfide bonded to produce dimeric  
 CC species having a conformation so that (P) is capable of inducing  
 CC endochondral bone formation in mammal when disposed in the matrix and  
 CC accessible to the cells. Also included are substantially a pure mammalian  
 CC osteogenic protein (comprising a pair of unglycosylated polypeptide  
 CC chains and capable of inducing endochondral bone formation in association  
 CC with a matrix when implanted in a mammal, where the osteogenic protein  
 CC comprises peptides derived from human or mouse OP1), a DNA sequence  
 CC encoding a protein capable of inducing endochondral bone formation in a  
 CC mammal, a vector comprising the DNA, a host cell harbouring and capable  
 CC of expressing (DNA or vector), an osteogenic protein as defined above  
 CC as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable  
 CC of binding specifically to an epitope on the osteogenic proteins. The  
 CC osteogenic device is useful for inducing local cartilage and bone  
 CC formation, for endochondral bone formation in a mammal, for inducing  
 CC cartilage or endochondral bone formation in a mammal, or for inducing  
 CC endochondral bone formation in a non-union fracture in a mammal. The  
 CC osteogenic device is useful for cartilage repair in a mammal, in  
 CC periodontal or dental reconstructive procedures, or in endochondral bone  
 CC reconstructive procedures. The antibody is useful for selectively  
 CC extracting osteogenic protein from a mixture of molecules. The host cell  
 CC is useful for producing a protein by recombinant gene expression. The  
 CC osteogenic proteins are useful to raise monoclonal are polyclonal  
 CC antibodies capable of specifically binding to an epitope of the

CC osteogenic protein. The present sequence represents a human osteogenic  
 CC protein as a fusion protein with an E. coli leader sequence for  
 CC heterologous expression. Note: The claims refer to regions of mouse and  
 CC human osteogenic proteins which are functional in the osteogenic device,  
 CC however the authors refer to a DNA SEQ ID number where they really mean  
 CC to refer to a protein.  
 XX  
 XX SQ Sequence 317 AA;  
 XX  
 XX Query Match 100.0%; Score 111; DB 8; Length 317;  
 XX Best Local Similarity 100.0%; Pred. NO.1.4e-06;  
 XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 XX  
 XX 1 INPETHKPCCAPTQLNALS 20  
 XX |||||  
 XX 272 INPETHKPCCAPTQLNALS 291  
 XX  
 XX RESULT 90  
 XX ADM80495  
 XX ID ADM80495 standard; protein; 317 AA.  
 XX  
 XX AC ADM80495;  
 XX  
 XX DT 03-UN-2004 (first entry)  
 XX  
 XX DE Human osteogenic protein, OP1B.  
 XX  
 XX KW human; osteogenic device; osteogenic protein; OP1B; biocompatible matrix;  
 XX KW endochondral bone formation; non-union fracture; cartilage formation;  
 XX KW periodontal reconstructive procedure; dental reconstructive procedure;  
 XX KW cartilage repair.  
 XX  
 XX OS Homo sapiens.  
 XX  
 XX PN US2003224996-A1.  
 XX  
 XX PD 04-DEC-2003.  
 XX  
 XX PF 17-DEC-2002; 2002US-00321799.  
 XX  
 XX PR 08-APR-1988; 88US-00179406.  
 XX PR 15-AUG-1988; 88US-00232630.  
 XX PR 28-JAN-1992; 92US-00827052.  
 XX PR 21-FEB-1992; 92US-00841646.  
 XX PR 01-NOV-1993; 93US-00147023.  
 XX PR 24-MAY-1995; 95US-00449699.  
 XX PR 04-SEP-1998; 98US-00148925.  
 XX  
 XX PA (STYC ) STRYKER CORP.  
 XX  
 XX PI Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
 XX  
 XX DR WPI: 2004-167144/16.  
 XX DR N-PSDB; ADM80494.  
 XX  
 XX PT Osteogenic device for implantation in mammal comprising osteogenic  
 XX protein dispersed within biocompatible matrix, osteogenic protein  
 XX comprising pair of unglycosylated protein chains, inducing endochondral  
 XX bone formation.  
 XX  
 XX PS Disclosure; SEQ ID NO 11; 136pp; English.  
 XX  
 XX The invention relates to an osteogenic device for implantation in mammal,  
 XX comprising osteogenic protein dispersed within biocompatible matrix  
 XX defining pores, differentiation, and proliferation of migratory  
 XX progenitor cells from body of mammal, improvement where osteogenic  
 XX protein comprises pair of unglycosylated protein chains disulfide bonded  
 XX to produce dimeric species capable of inducing endochondral bone  
 XX formation. The device is useful for inducing endochondral bone formation  
 XX in a non-union fracture in a mammal, for inducing cartilage or  
 XX endochondral bone formation in a mammal, for use in periodontal or dental  
 XX reconstructive procedures, for use in cartilage repair in a mammal, for

CC use in endochondral bone reconstructive procedures. The device is useful  
 CC for inducing cartilage or endochondral bone formation in a mammal  
 CC comprising the step of implanting the mammal at a locus accessible to  
 CC migratory progenitor cells. The device is useful for inducing local  
 CC cartilage bone formation and endochondral bone formation in a non-union  
 CC fracture in a mammal. The antibody capable of binding specifically to the  
 CC osteogenic protein is useful for selectively extracting osteogenic  
 CC protein from a mixture of molecules. The present sequence represents the  
 CC amino acid sequence of the human osteogenic protein, OPB.

XX  
 SQ Sequence 317 AA;

Query Match 100.0%; Score 111; DB 8; Length 317;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPBTVPKPCCAPTQNLNLS 20  
 DB 272 INPBTVPKPCCAPTQNLNLS 291

RESULT 91  
 ADO05621  
 ID ADO05621 standard; protein; 365 AA.

XX  
 AC ADO05621;  
 XX  
 DT 15-JUL-2004 (first entry)  
 XX  
 DE Human EXMES polypeptide (ID 7521939CD1).

XX  
 KW EXMES: extracellular messenger; transgenic; human; anti-HIV; anabolic;  
 KW hypertensive; anti-allergic; antianemic; antidiabetic;  
 KW antidiabetic; antidiabetic; antidiabetic; dermatological;  
 KW immunosuppressive; antidiabetic; nephrotropic; anticholesteric; muscular;  
 KW neuroprotective; ophthalmological; uropathic; cytoskeletal; endocrine;  
 KW antineoplastic; antineoplastic; antineoplastic; hepatotropic;  
 KW antineoplastic; vasotropic; anticoagulant; thrombolytic; vaccine;  
 KW gene therapy.

XX  
 OS Homo sapiens.  
 XX  
 PN WO2004033637-A2.  
 XX  
 PD 22-APR-2004.  
 XX  
 PF 03-OCT-2003; 2003WO-US031535.  
 XX  
 PR 04-OCT-2002; 2002US-0416004P.  
 PR 08-NOV-2002; 2002US-0424862P.  
 XX  
 PA (INCY-) INCYTE CORP.  
 XX  
 PI Elliott VS, Emerging BM, Lindquist EA, Khare R, Chawla NK;  
 PI Rankumar U, Lee ST, Tran UK, Richardson TW, Marquis JP, Swarnakar A;  
 XX  
 DR WPI; 2004-340907/31.  
 DR N-PSDB; ADO05636.  
 XX  
 PT New isolated polypeptide, useful for diagnosing, preventing, or treating  
 PT autoimmune/inflammatory disorders (e.g., AIDS), cell proliferative  
 PT disorders (e.g., burstis) and endocrine disorders (e.g., dwarfism).  
 XX  
 PS Claim 1; SEQ ID NO 12; 137pp; English.

XX  
 CC The invention relates to human extracellular messenger (EXMES)  
 CC polypeptide and encoding recombinant methodology. Compositions comprising  
 CC EXMES, specific antibodies are useful for treating a disease or condition  
 CC associated with decreased expression of functional extracellular  
 CC messengers. The polypeptide and its encoding polynucleotide is useful for  
 CC diagnosing, preventing and treating autoimmune/inflammatory disorders  
 CC such as AIDS, Addison's disease, allergies, anaemia, asthma.

CC atherosclerosis, Crohn's disease, atopic dermatitis, diabetes mellitus,  
 CC glomerulonephritis, Grave's disease, myasthenia gravis, Reiter's  
 CC syndrome, Werner syndrome, rheumatoid arthritis, Sjogren's syndrome,  
 CC multiple sclerosis, ulcerative colitis, a cell proliferative disorder  
 CC such as actinic keratosis, arteriosclerosis, burstis, cirrhosis,  
 CC hepatitis, myelofibrosis, psoriasis, cancers, and endocrine disorders  
 CC such as aneurysm, vascular malformation, thrombosis, Sheehan syndrome,  
 CC Kallman's disease, and dwarfism. The oligonucleotide primers derived from  
 CC the polynucleotide encoding the polypeptide is useful in transfect  
 CC single nucleotide polymorphisms. The microarray is useful to generate  
 CC imaging techniques which monitor the relative expression levels of large  
 CC number of genes simultaneously. The polypeptide may be used to generate  
 CC hybridization probes useful in mapping the naturally occurring genomic  
 CC sequence and for screening libraries of compounds in any of a variety of  
 CC drug screening techniques. The present sequence represents a human EXMES  
 CC polypeptide.

XX  
 SQ Sequence 365 AA;

Query Match 100.0%; Score 111; DB 8; Length 365;  
 Best Local Similarity 100.0%; Pred. No. 1.6e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPBTVPKPCCAPTQNLNLS 20  
 DB 320 INPBTVPKPCCAPTQNLNLS 339

RESULT 92  
 AAR44752  
 ID AAR44752 standard; protein; 408 AA.

XX  
 AC AAR44752;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 06-JUN-1994 (first entry)  
 XX  
 DE Osteogenic fusion protein OPD.

XX  
 KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 KW vascularisation; mineralisation; differentiation.

XX  
 OS Homo sapiens.  
 XX  
 PN US5266683-A.  
 XX  
 PD 30-NOV-1993.  
 XX  
 PF 21-FEB-1992; 92US-00841646.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569922.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.

XX  
 FT Key Location/Qualifiers  
 FT Region 1..13  
 FT Region /label= leader sequence.  
 FT Region 14..408  
 FT Region /note= "Pro form of Opl."

XX (STYC) STRYKER CORP.  
 PA Kuberassampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 PI WPI, 1993-324521/40.  
 DR N-PSDB; AAQ72714.  
 XX New pure mammalian osteogenic proteins - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.  
 PS Disclosure; Col 111-114; 128pp; English.  
 CC The fusion protein encodes the entire pro form of OPI (residues 39-431 of  
 CC AAR4746) linked via an Asp-Pro cleavage site to a leader sequence  
 CC (residues 1-13) suitable for promoting expression in E. coli. The protein  
 CC when in association with a matrix can induce at the locus of an implant  
 CC the full development cascade of endochondral bone formation including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC osteogenic protein can also be used to repair both bone and cartilage in  
 CC the treatment of osteoarthritis. (Updated on 01-JUL-2002 to add missing  
 CC PA field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-  
 CC MAR-2003 to correct PR field.)  
 XX Sequence 408 AA;  
 SQ

Query Match 100.0%; Score 111; DB 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPPTQNAIS 20  
 Db 363 INPETHKPCCAPPTQNAIS 362

RESULT 93  
 AAR51658  
 ID AAR51658 standard; protein; 408 AA.  
 XX  
 AC AAR51658;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 09-JUN-1995 (first entry)  
 XX  
 DE Osteogenic fusion protein 1D OPID.  
 XX  
 KM Osteogenic protein 1D; OPID; osteoarthritis; osteogenesis;  
 KM cartilage and endochondral bone formation; allograft repair;  
 KM periodontal, dental and craniofacial reconstruction;  
 KM non-union fracture repair.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..16  
 FT /label= sig\_peptide  
 FT /note= "leader sequence (short TRP)"  
 XX  
 PN US5354557-A.  
 XX  
 PD 11-OCT-1994.  
 PF 18-DEC-1992; 92US-00993387.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.

PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660152.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Rueger DC, Kuberassampath T, Ozkaynak E, Oppermann H;  
 XX WPI, 1994-324521/40.  
 DR N-PSDB; AAQ72714.  
 XX  
 PT Implantable device for inducing osteogenesis - comprises porous matrix  
 PT contg. non-glycosylated dimeric, disulphide linked osteogenic protein.  
 PS Disclosure; Col 111-114; 128pp; English.  
 XX  
 CC AAR51658 encodes the osteogenic fusion protein 1D (OPID) which  
 CC includes a "short TRP" leader sequence suitable for promoting expression  
 CC in E. coli. Fragments of the osteogenic unglycosylated polypeptides  
 CC produced can be disulphide bonded to form dimers, which form an essential  
 CC component of an osteogenic protein. This protein is dispersed in a  
 CC biodegradable matrix which can be implanted into a mammalian bone marrow  
 CC cavity, here it can induce local cartilage, bone and endochondral bone  
 CC formation; and it can also accelerate allograft repair. This implant has  
 CC the advantage of inducing all stages of bone formation and of having a  
 CC higher specific activity than other known biosynthetic materials. The  
 CC implant can be used to repair non-union fractures and cartilage; treat  
 CC osteoarthritis; and aid in periodontal, dental or craniofacial  
 CC reconstruction. (Updated on 01-JUL-2002 to add missing PA field.)  
 CC (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to  
 CC correct PR field.)  
 XX  
 SQ Sequence 408 AA;  
 XX

Query Match 100.0%; Score 111; DB 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPPTQNAIS 20  
 Db 363 INPETHKPCCAPPTQNAIS 362

RESULT 94  
 AAR5768  
 ID AAR5768 standard; protein; 408 AA.  
 XX  
 AC AAR5768;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 20-JUN-1996 (first entry)  
 XX  
 DE OPID fusion protein encoded by OPI(d) cDNA.  
 XX  
 KM Human; osteogenic protein; hOP-1; murine; MOP-1; TGF-beta superfamily;  
 KM transforming growth factor-beta; dimer; antibody; epitope; hippocampus;  
 KM purification; implantable osteogenic device; bone formation; craniofacial;  
 KM anomaly; skeletal; dental; endochondral bone formation; MBS leader;  
 KM non-union fracture; cartilage repair; osteoarthritis.  
 XX  
 OS Homo sapiens.  
 OS Escherichia coli.  
 OS  
 FH Key Location/Qualifiers  
 FT Peptide 1..13  
 FT /note= "Short TRP leader peptide"  
 FT Cleavage-site 14..15

FT /note= "Asp-Pro acid cleavage site"  
FT 16.317  
/note= "Residues 39-431 of hOP-1, represents pro-hOP-1"

US5468845-A.

21-NOV-1995.

01-NOV-1993; 93US-00147023.

08-APR-1988; 88US-00179406.

15-AUG-1988; 88US-00232630.

23-FEB-1989; 89US-00315342.

17-OCT-1989; 89US-00422613.

17-OCT-1989; 89US-00422639.

22-FEB-1990; 90US-00483913.

20-AUG-1990; 90US-00569920.

07-SEP-1990; 90US-00579865.

18-OCT-1990; 90US-00599543.

21-NOV-1990; 90US-00616374.

04-DEC-1990; 90US-00621849.

04-DEC-1990; 90US-00621988.

22-FEB-1991; 91US-00660162.

20-DEC-1991; 91US-00810560.

28-JAN-1992; 92US-00827052.

21-FEB-1992; 92US-00841646.

(STYC ) STRYKER CORP.

Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;

WPI; 1996-010159/01.

N-PSDB; AAT02608.

Antibodies with osteogenic protein binding specificity - used in

purification of osteogenic proteins, and as antigenic proteins.

Disclosure; Col 113-116; 129pp; English.

The sequences given in AAR85765-70 represent fusion proteins comprising

fragments of human osteogenic proteins. The MFE leader sequence is

suitable for promoting expression in E. coli. The genes were expressed in

E. coli under the control of a synthetic T7P promoter-operator to produce

synthetic inclusion bodies. Constructs containing the Asp-Pro site were

cleaved with acid. The resulting products were purified, refolded and

allowed to dimerise. The proteins had osteogenic activity when properly

folded and dimerised. Antisera were produced against the purified

proteins. The resulting antibodies had binding specificities for

osteogenic proteins. The antibodies are capable of binding specifically

to an epitope of the osteogenic protein and may be used in purification

protocols. Osteogenic proteins, such as these, may be used in an

implantable osteogenic device which allows predictable bone formation to

correct acquired and congenital craniofacial and other skeletal or dental

anomalies. They may be used to induce local endochondral bone formation

in non-union fractures and in other clinical applications including

dental and periodontal applications where bone formation is required.

Other potential applications include cartilage repair, e.g. in the

treatment of osteoarthritis. (Updated on 25-MAR-2003 to correct PR

field.) (Updated on 25-MAR-2003 to correct PR field.)

SQ Sequence 408 AA;

Query Match 100.0%; Score 111; DB 2; Length 408;

Best Local Similarity 100.0%; Pred. No. 1.7e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 363 INPETHKPCCAPTQNLMAIS 382

RESULT 95

AAW44308  
ID AAW44308 standard; protein; 408 AA.

AC AAW44308;

27-MAY-1998 (first entry)

Human osteogenic fusion protein OP1D.

Human; osteogenic fusion protein; subunit; endochondral bone formation;

dimeric; recombinant protein.

Synthetic.

OS Homo sapiens.

PN US5714589-A.

03-FEB-1998.

23-MAY-1995; 95US-00447570.

08-APR-1988; 88US-00179406.

15-AUG-1988; 88US-00232630.

23-FEB-1989; 89US-00315342.

17-OCT-1989; 89US-00422613.

22-FEB-1990; 90US-00483913.

20-AUG-1990; 90US-00569920.

07-SEP-1990; 90US-00579865.

18-OCT-1990; 90US-00616374.

21-NOV-1990; 90US-00600024.

04-DEC-1990; 90US-00621849.

22-FEB-1991; 91US-00660162.

20-DEC-1991; 91US-00810560.

28-JAN-1992; 92US-00827052.

21-FEB-1992; 92US-00841646.

01-NOV-1993; 93US-00147023.

(STYC ) STRYKER CORP.

Pang RH, Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;

WPI; 1998-158353/14.

N-PSDB; AAV15211.

Extraction of osteogenic protein from mixture - using antibodies specific

for novel polypeptide chains useful as subunit(s) of dimeric osteogenic

proteins(s).

Disclosure; Col 111-114; 127pp; English.

The present sequence represents a human osteogenic fusion protein, which

is used in the present invention. The present invention describes methods

for selectively extracting an osteogenic protein (OP) from a mixture. The

method comprises: (a) exposing the mixture to an antibody that

specifically binds OP, separating the resulting antibody-protein complex

from the mixture, and dissociating the complex. In the methods OP

comprises a pair of oxidised subunits that are disulphide-bonded to form

a dimer, and one of the subunits has an amino acid (aa) sequence

sufficiently homologous to residues 335-431 of a 431 aa protein

designated Ops, sequence given in the specification. In dimeric form OP

is capable of inducing cartilage and endochondral bone formation in a

mammal when disposed within a matrix implanted in the mammal. The methods

are used for recovering the recombinant proteins from cell cultures

SQ Sequence 408 AA;

Query Match 100.0%; Score 111; DB 2; Length 408;

Best Local Similarity 100.0%; Pred. No. 1.7e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 363 INPETHKPCCAPTQNLMAIS 382

RESULT 95

QY 1 IMPETVKKPCCAPTQNLNAIS 20  
 |||||  
 Db 363 IMPETVKKPCCAPTQNLNAIS 382

RESULT 96  
 AAM89685  
 ID AAM89685 standard; protein; 408 AA.  
 AC AAM89685;  
 XX  
 DT 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 XX  
 DE Osteogenic fusion protein OPID.  
 XX  
 KW Human; osteogenic protein; OP-1; OPX; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vasculitis; mineralisation;  
 KW bone marrow differentiation.  
 XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN US5863758-A.  
 PD 26-JAN-1993.  
 XX  
 PF 23-MAY-1995; 95US-00449700.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-0015342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Pang RHL, Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;  
 XX WPI; 1999-131303/11.  
 DR N-PSDB; AAX00236.  
 DR  
 XX Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.  
 XX  
 PS Disclosure; Col 111-114; 127PP; English.  
 XX  
 CC The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP1-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transfected with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that

CC encodes hOP1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vascularisation, mineralisation and bone marrow differentiation. The  
 CC present sequence represents an osteogenic fusion protein OPID. (Updated  
 CC on 20-MAR-2003 to correct PA field.)  
 XX  
 SQ Sequence 408 AA;  
 XX

Query Match 100.0%; Score 111; DB 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 IMPETVKKPCCAPTQNLNAIS 20  
 |||||  
 Db 363 IMPETVKKPCCAPTQNLNAIS 382

RESULT 97  
 AAY43119  
 ID AAY43119 standard; protein; 408 AA.  
 AC AAY43119;  
 XX  
 DT 16-DEC-1999 (first entry)  
 DT  
 DE Osteogenic protein OPID fusion protein sequence.  
 XX  
 KW Chondrogenic protein; biodegradable matrix; cell proliferation;  
 KW cell differentiation; migratory progenitor cell; cartilage formation;  
 KW allogenic implant; xenogenic implant; endochondral bone formation;  
 KW osteogenic protein.  
 XX  
 OS Synthetic.  
 OS  
 PN US5858441-A.  
 PD 28-SEP-1999.  
 XX  
 PF 24-MAY-1995; 95US-00449699.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-0015342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 22-DEC-1992; 92US-00995345.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC) STRYKER BIOTECH CORP.  
 XX  
 PI Rueger DC, Pang RHL, Kuberasampath T, Ozkaynak E, Oppermann H;  
 XX WPI; 1999-589530/50.  
 DR N-PSDB; AAZ27587.  
 DR  
 XX Implant for mammals permitting the influx, proliferation and

PT differentiation of migratory progenitor cells, useful for inducing  
 PT endochondral bone formation in mammals.  
 XX  
 PS Disclosure, Col 109-112; 127pp; English.  
 XX  
 CC This sequence is an osteogenic protein ID (OPID) fusion protein. The  
 CC invention relates to a device for implantation in a mammal comprising a  
 CC chondrogenic protein (I) dispersed within a biocompatible, in vivo  
 CC degradable matrix defining pores which permits the influx, proliferation  
 CC and differentiation of migratory progenitor cells, where (I) comprises a  
 CC substantially pure protein with the amino acid sequence VPRPCCAPT, which  
 CC is capable of inducing cartilage formation. The device is used as an  
 CC allogenic or xenogenic implant for the induction endochondral bone  
 CC formation in mammals  
 XX  
 SQ Sequence 408 AA;  
 CC  
 Query Match 100.0%; Score 111; DB 2; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNALS 20  
 Db 363 INPETHKPCCAPTQNLNALS 382  
 XX  
 RESULT 98  
 ADJ62690  
 ID ADJ62690 standard; protein; 408 AA.  
 XX  
 AC ADJ62690;  
 XX  
 DT 06-MAY-2004 (first entry)  
 XX  
 DE Human osteogenic protein ID, OPID.  
 XX  
 KW human, osteogenic protein ID, OPID; osteogenic device;  
 KW endochondral bone formation; bone repair; cartilage repair;  
 KW vascularisation; mineralisation; bone marrow differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US6551995-B1.  
 XX  
 PD 22-APR-2003.  
 XX  
 PF 04-SEP-1998; 98US-00148925.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422623.  
 PR 17-OCT-1989; 89US-00422629.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00800024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621989.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 PR 24-MAY-1995; 95US-00449699.  
 XX  
 PA (STYC ) STRYKER CORP.  
 XX  
 PI Oppermann H, Ozkayrak E, Kuberessampath T, Rueger DC, Pang RHL,  
 XX

DR WPI: 2003-575998/54.  
 DR N-PSDB; ADJ62689.  
 XX  
 PT Osteogenic device useful for inducing endochondral bone formation in  
 PT mammals, comprises ceramic or biodegradable non-collagen polymer matrix  
 PT containing substantially pure natural-sourced mammalian osteogenic  
 PT protein.  
 XX  
 PS Disclosure, SEQ ID NO 15; 127pp; English.  
 XX  
 CC The invention relates to an osteogenic device for implantation in a  
 CC mammal, comprising a ceramic or biodegradable non-collagen polymer matrix  
 CC defining pores of a dimension sufficient to permit influx,  
 CC differentiation and proliferation of migratory progenitor cells from the  
 CC body of mammal, and a substantially pure osteogenic protein competent to  
 CC induce endochondral bone formation when disposed in the matrix and  
 CC implanted in mammal. The device is useful for producing endochondral bone  
 CC formation in mammals, for bone and cartilage repair, for inducing the  
 CC full developmental cascade of endochondral bone formation including  
 CC vascularisation, mineralisation and bone marrow differentiation at the  
 CC locus of an implant when implanted in a mammalian body. The device is  
 CC useful for bone formation in various orthopedic, periodontal and  
 CC reconstructive procedures. The present sequence represents the amino acid  
 CC sequence of human osteogenic protein ID, OPID.  
 XX  
 SQ Sequence 408 AA;  
 CC  
 Query Match 100.0%; Score 111; DB 7; Length 408;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNALS 20  
 Db 363 INPETHKPCCAPTQNLNALS 382  
 XX  
 RESULT 99  
 ADE52761  
 ID ADE52761 standard; protein; 408 AA.  
 XX  
 AC ADE52761;  
 XX  
 DT 29-JAN-2004 (first entry)  
 XX  
 DE Human osteogenic protein, OPID fusion.  
 XX  
 KW Human; osteogenic protein; OP1; CBMP2A; CBMP2B; osteogenic device;  
 KW endochondral bone formation; cartilage formation; non-union fracture;  
 KW cartilage repair; dental reconstructive procedure.  
 XX  
 OS Chimeric.  
 OS Homo sapiens.  
 OS Escherichia coli.  
 XX  
 PN US2003069401-A1.  
 XX  
 PD 10-APR-2003.  
 XX  
 PF 24-OCT-1997; 97US-00957425.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422629.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 18-OCT-1990; 90US-00616374.  
 PR 21-NOV-1990; 90US-00621989.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 XX

PR 20-DEC-1991; 91US-00810560.  
XX 28-JAN-1992; 92US-00827052.  
PR 21-FEB-1992; 92US-00841646.  
PR 22-DEC-1992; 92US-0095345.  
PR 01-NOV-1993; 93US-00147023.  
PR 23-MAY-1995; 95US-00447570.  
XX  
PA (OPBE/) OPPERMAN H.  
PA (OZKA/) OZKAYNAK E.  
PA (KUBE/) KUBERASAMPATH T.  
PA (RUEG/) RUEGER D C.  
PA (PANG/) PANG R H L.  
XX  
PI Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
XX WPI; 2004-008896/01.  
DR P-PSDB; ADE52760.  
XX  
PT Osteogenic device for inducing endochondral bone formation, has  
XX osteogenic protein comprising a pair of unglycosylated protein chains  
PT disulfide bonded to produce dimeric species, dispersed within  
PT biocompatible matrix.  
XX  
PS Disclosure; SEQ ID NO 15; 130pp; English.  
XX  
CC The invention relates to an osteogenic device for implantation in a  
CC mammal, comprising osteogenic protein (OP) dispersed within a  
CC biocompatible, in vivo biodegradable matrix, where OP comprises a pair  
CC (P) of unglycosylated protein chains disulfide bonded to produce dimeric  
CC species having a conformation so that (P) is capable of inducing  
CC endochondral bone formation in mammal when disposed in the matrix and  
CC accessible to the cells. Also included are substantially a pure mammalian  
CC osteogenic protein (comprising a pair of unglycosylated polypeptide  
CC chains and capable of inducing endochondral bone formation in association  
CC with a matrix when implanted in a mammal, where the osteogenic protein  
CC comprises peptides derived from human or mouse OP1), a DNA sequence  
CC encoding a protein comprising the DNA, a host cell harbouring and capable  
CC of expressing (DNA or vector), an osteogenic protein as defined above  
CC expressed from recombinant DNA in a host cell, a polypeptide chain useful  
CC as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable  
CC of binding specifically to an epitope on the osteogenic proteins. The  
CC osteogenic device is useful for inducing local cartilage and bone  
CC formation, for endochondral bone formation in a mammal, for inducing  
CC cartilage or endochondral bone formation in a mammal, or for inducing  
CC endochondral bone formation in a non-union fracture in a mammal. The  
CC osteogenic device is useful for cartilage repair in a mammal, in  
CC periodontal or dental reconstructive procedures, or in endochondral bone  
CC reconstructive procedures. The antibody is useful for selectively  
CC extracting osteogenic protein from a mixture of molecules. The host cell  
CC is useful for producing a protein by recombinant gene expression. The  
CC osteogenic proteins are useful to raise monoclonal or polyclonal  
CC antibodies capable of specifically binding to an epitope of the  
CC osteogenic protein. The present sequence represents a human osteogenic  
CC protein as a fusion protein with an E. coli leader sequence for  
CC heterologous expression. Note: The claims refer to regions of mouse and  
CC human osteogenic proteins which are functional in the osteogenic device,  
CC however the authors refer to a DNA SEQ ID number where they really mean  
CC to refer to a protein.  
XX  
SQ Sequence 408 AA;  
XX  
Query Match 100.0%; Score 111; DB 8; Length 408;  
Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 363 INPETHKPCCAPTQNLNALS 382

RESULT 100  
ADM80499

ID ADM80499 standard; protein; 408 AA.  
XX ADM80499;  
AC  
XX 03-JUN-2004 (first entry)  
DT  
XX  
XX Human osteogenic protein, OP1D.  
DE  
XX human; osteogenic protein; OP1D; biocompatible matrix;  
XX endochondral bone formation; non-union fracture; cartilage formation;  
XX periodontal reconstructive procedure; dental reconstructive procedure;  
XX cartilage repair.  
XX  
XX Homo sapiens.  
XX US200324396-A1.  
XX  
XX 04-DEC-2003.  
XX  
XX 17-DEC-2002; 2002US-00321799.  
XX  
XX 08-APR-1998; 88US-00179406.  
XX 15-AUG-1998; 88US-00232630.  
XX 28-JAN-1992; 92US-00827052.  
XX 21-FEB-1992; 92US-00841646.  
XX 01-NOV-1993; 93US-00147023.  
XX 04-MAY-1995; 95US-00449699.  
XX 24-SEP-1998; 98US-00148925.  
XX  
PA (STYC) STRYKER CORP.  
XX  
PI Opperman H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL;  
XX WPI; 2004-167144/16.  
DR N-PSDB; ADM80498.  
XX  
PT Osteogenic device for implantation in mammal comprising osteogenic  
PT protein dispersed within biocompatible matrix, osteogenic protein  
PT comprising pair of unglycosylated protein chains, inducing endochondral  
PT bone formation.  
XX  
PS Disclosure; SEQ ID NO 15; 136pp; English.  
XX  
CC The invention relates to an osteogenic device for implantation in mammal,  
CC comprising osteogenic protein dispersed within biocompatible matrix  
CC defining pores, differentiation, and proliferation of migratory  
CC progenitor cells from body of mammal, improvement where osteogenic  
CC protein comprises pair of unglycosylated protein chains disulfide bonded  
CC to produce dimeric species capable of inducing endochondral bone  
CC formation. The device is useful for inducing endochondral bone  
CC formation in a non-union fracture in a mammal, for inducing cartilage or  
CC endochondral bone formation in a mammal, for use in periodontal or dental  
CC reconstructive procedures, for use in cartilage repair in a mammal, for  
CC use in endochondral bone reconstructive procedures. The device is useful  
CC for inducing cartilage or endochondral bone formation in a mammal  
CC comprising the step of implanting the mammal at a locus accessible to  
CC migratory progenitor cells. The device is useful for inducing local  
CC cartilage bone formation and endochondral bone formation in a non-union  
CC fracture in a mammal. The antibody capable of binding specifically to the  
CC osteogenic protein is useful for selectively extracting osteogenic  
CC protein from a mixture of molecules. The present sequence represents the  
CC amino acid sequence of the human osteogenic protein, OP1D.  
XX  
SQ Sequence 408 AA;  
XX  
Query Match 100.0%; Score 111; DB 8; Length 408;  
Best Local Similarity 100.0%; Pred. No. 1.7e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 363 INPETHKPCCAPTQNLNALS 382



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RESULT 101
AAR07335
ID AAR07335 standard; protein; 431 AA.
XX
AC AAR07335;
XX
DT 25-MAR-2003 (revised)
DT 30-JAN-1991 (first entry)
XX
DE Human Bone Morphogenesis Protein-7.
XX
KW human bone morphogenic protein-7; wound healing; tissue repair;
KW cartilage formation.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Cleavage-site 299..300
FT Protein 301..431
FT /label= mature BMP-7
XX
PN W09011366-A.
PD 04-OCT-1990.
PF 27-MAR-1990; 90WO-US001630.
PR 28-MAR-1989; 89US-00329610.
PR 04-MAY-1989; 89US-00347559.
PR 23-JUN-1989; 89US-00370544.
PR 23-JUN-1989; 89US-00370547.
PR 23-JUN-1989; 89US-00370549.
PR 15-NOV-1989; 89US-00437409.
PR 17-NOV-1989; 89US-00438919.
PR 07-MAR-1990; 90US-00490033.
XX
XX (GENY ) GENETICS INST INC.
XX
PI Wang EA, Wozney JM, Celeste AJ;
DR WPI; 1990-320266/42.
XX
XX New bone morphogenic proteins, BMP-5, -6 and -7 - used for stimulating,
PT promoting and inducing bone and/or cartilage formation, wound healing and
PT tissue repair.
XX
XX Example; Page 65; 96pp; English.
XX
XX The positive clone PBH7-9 was identified from a human osteosarcoma cDNA
CC library and its DNA insert was sequenced. It was found to contain the BMP
CC -7 coding sequence. Mature active BMP-7 is expected to comprise a
CC homodimer whose subunits are truncated versions of the BMP-7
CC proprotein. (See features) See also AAQ06166-Q06173, AAQ06187, AAQ06189-
CC Q06192. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC 2003 to correct PA field.)
XX
SQ Sequence 431 AA;
CY Query Match 100.0%; Score 11; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1,8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0
DB 1 INPETHPKCCAPLTOLNALS 20
386 INPETHPKCCAPLTOLNALS 405
RESULT 102
AAR12106
ID AAR12106 standard; protein; 431 AA.
AC AAR12106;

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Query Match	Similarity	Score	DB 2	Length	431
Best Local	100.0%	100.0%	Pred.	No.	1.8e-06
Matches	20	Conservative	0	Mismatches	0
				Indels	0
				Gaps	0

1 INPETHKCCAPTOINAI 20  
 |||  
 386 INPETHKCCAPTOINAI 405

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RESULT 103
AAR23833
XX AAR23833 standard; protein; 431 AA.
XX
AC AAR23833;
XX
XX 25-MAR-2003 (revised)
DT 09-NOV-1992 (first entry)
XX
DE Human osteogenic protein hOP1-PP.
XX
XX Prepro protein; osteogenesis; human hippocampus; OP1-18.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
FH 293..431
FT /label= OP1-18
FT /note= "mature protein"
FT 330..431
FT /label= OP7
FT /note= "Conserved seven cysteine skeleton"
FT 335..431
FT /label= OPS
FT /note= "conserved six cysteine skeleton"
XX
XX W09207004-A1.
XX
XX 30-APR-1992.
XX
XX 18-OCT-1991; 91WO-US007654.
XX
XX 18-OCT-1990; 90US-00600024.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Ozkaynak E, Oppermann H, Kuberasampath T, Rueger DC;
XX
XX WPI: 1992-167101/20.
XX
XX N-PSDB; AAQ24518.
XX
XX Osteogenic polypeptides capable of inducing endochondral bone formation -
XX useful for bone and cartilage repair, treatment of osteoarthritis and
XX correction of skeletal and dental abnormalities.
XX
XX Disclosure; Page 39-41; 54pp; English.
XX
XX The human OP1 gene encodes an immature translation product which is
XX processed to a mature sequence of 139 amino acids ("OP1-18"). The mature
XX hOP1 protein shows significant sequence homology (i.e. 98%) with the
XX mature murine OP1 ("mOP1"). The sequences differ at only three positions.
XX The prepro sequences share substantially less homology. See AAR23832 for
XX murine OP1. (Updated on 25-MAR-2003 to correct PN field.)
XX
XX Sequence 431 AA;
SQ
Query Match 100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Cy 1 INPETHKPCCAPTOLNAIS 20
Db 386 INPETHKPCCAPTOLNAIS 405

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DT 26-FEB-1993 (first entry)
XX
XX Human osteogenic protein hOP1.
DE
XX Morphogen; morphogenic protein.
XX
XX Homo sapiens.
XX
XX W09215323-A1.
XX
XX 17-SEP-1992.
XX
XX 11-MAR-1992; 92WO-US001968.
XX
XX 11-MAR-1991; 91US-00667274.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Cohen CM, Kuberasampath T, Pang RHL, Oppermann H, Rueger DC;
XX
XX WPI: 1992-331475/40.
XX
XX N-PSDB; AAQ28735.
XX
XX Compens. for increasing progenitor cell population - contain a morphogen
XX to induce proliferation, useful for inhibiting neoplastic growth,
XX inducing tissue repair and in diagnosis of tissue dysfunction.
XX
XX Disclosure; Page 93-95; 132pp; English.
XX
XX Mature hOP1 is one of the preferred known morphogens which can be used in
XX the manufacture of pharmaceuticals for inducing non-chondrogenic
XX mammalian tissue growth, progenitor cell proliferation and hepatic tissue
XX growth and for maintaining the phenotypic expression of differentiated
XX cells in a mammal. Morphogens sharing at least 70% homology with hOP1 or
XX at least 65% identity with residues 43-139 of hOP1 are included. (Updated
XX on 25-MAR-2003 to correct PN field.)
XX
XX Sequence 431 AA;
SQ
Query Match 100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Cy 1 INPETHKPCCAPTOLNAIS 20
Db 386 INPETHKPCCAPTOLNAIS 405

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RESULT 104
AAR27289
XX AAR27289 standard; protein; 431 AA.
XX
XX AAR27289;
XX
XX 25-MAR-2003 (revised)
DT

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RESULT 105
AAR44746
XX AAR44746 standard; protein; 431 AA.
XX
XX AAR44746;
XX
XX 25-MAR-2003 (revised)
DT 01-JUN-2002 (revised)
DT 06-JUN-1994 (first entry)
XX
XX Osteogenic protein OP1.
DE
XX Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;
XX vascularisation; mineralisation; differentiation.
XX
XX Homo sapiens.
XX
XX US5266683-A.
XX
XX 30-NOV-1993.
XX
XX 21-FEB-1992; 92US-00841646.
XX
XX 08-APR-1988; 88US-00179406.
XX
XX 15-AUG-1988; 88US-00232630.
PR

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PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422659.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621888.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Kuberampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 XX  
 DR WPI; 1993-395405/49.  
 DR N-PSDB; AAQ53141.  
 XX  
 PT New pure mammalian osteogenic proteins - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.  
 PS Claim 14; Col 69-72; 128pp; English.  
 XX  
 CC The osteogenic protein when in association with a matrix can induce at  
 CC the locus of an implant the full development cascade of endochondral bone  
 CC formation including vascularisation, mineralisation and bone marrow  
 CC differentiation. The osteogenic protein can also be used to repair both  
 CC bone and cartilage in the treatment of osteoarthritis. This is the pre-  
 CC pro form of the protein. (Updated on 01-JUL-2002 to add missing PA  
 CC field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-  
 CC 2003 to correct PR field.)  
 XX  
 SQ Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETYKPCCAPTQLNALIS 20  
 DB 386 INPETYKPCCAPTQLNALIS 405  
 RESULT 106  
 AAR33931  
 ID AAR33931 standard; protein; 431 AA.  
 XX  
 AC AAR33931;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 13-JUL-1993 (first entry)  
 XX  
 DE Morphogen hOP1 full length sequence.  
 XX  
 KM Morphogen; homodimer; stimulare; proliferation; progenitor cell;  
 KM differentiation; growth; redifferentiation; transformation; human; mouse;  
 KM Drosophila; Xenopus; committed cells; hippocampus.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO9305172-A1.  
 XX  
 PD 18-MAR-1993.  
 XX  
 PF 28-AUG-1992; 92WO-US007359.  
 XX  
 PR 30-AUG-1991; 91US-00752861.  
 XX  
 PI (CREA-) CREATIVE BIOMOLECULES INC.  
 PA

XX  
 PI Smart JE, Oppermann H, Ozkaynak E, Kuberampath T, Rueger DC;  
 PI Pang RHL, Cohen CN;  
 XX  
 DR WPI; 1993-100993/12.  
 DR N-PSDB; AAQ38857.  
 XX  
 PT Screening cpds. to determine ability to modulate effective concn. of a  
 PT morphogen - by assaying test tissue type cells for parameter indicative  
 PT of a prodn. level change of morphogen.  
 XX  
 PS Disclosure; Page 85-87; 132pp; English.  
 XX  
 CC This sequence represents the human morphogen hOP1, isolated from the  
 CC hippocampus. This morphogen is inactive when reduced but is active as an  
 CC oxidised homodimer and when oxidised in combination with other  
 CC morphogens. These morphogens are capable of stimulating proliferation of  
 CC progenitor cell, stimulating the differentiation of progenitor cells,  
 CC stimulating the proliferation of differentiated cells and supporting the  
 CC growth and maintenance of differentiated cells, including the  
 CC redifferentiation of transformed cells. These morphogens may also be  
 CC capable of inducing redifferentiation of committed cells under  
 CC appropriate environmental conditions. (Updated on 25-MAR-2003 to correct  
 CC PF field.)  
 XX  
 SQ Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 OY 1 INPETYKPCCAPTQLNALIS 20  
 DB 386 INPETYKPCCAPTQLNALIS 405  
 RESULT 107  
 AAR33408  
 ID AAR33408 standard; protein; 431 AA.  
 XX  
 AC AAR33408;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 09-JAN-2003 (revised)  
 DT 15-JUL-1993 (first entry)  
 XX  
 DE Human OP-1-PP.  
 XX  
 KM morphogenic; osteogenic protein; developmental cascade; hOP-1;  
 KM inflammation; anti-inflammatory; Transforming Growth Factor;  
 KM TGF-beta super-family; hippocampus.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key  
 FT Protein  
 FT Location/Qualifiers  
 FT 293..431  
 FT /note="contains conserved 7 cysteine skeleton"  
 XX  
 PN WO9304692-A1.  
 XX  
 PD 18-MAR-1993.  
 XX  
 PF 28-AUG-1992; 92WO-US007358.  
 XX  
 PR 30-AUG-1991; 91US-00752764.  
 PR 30-AUG-1991; 91US-00752861.  
 PR 30-AUG-1991; 91US-00753059.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 PI Kuberampath T, Pang RHL, Oppermann H, Rueger DC, Cohen CN;  
 PI Ozkaynak E, Smart JE;  
 XX

```

DR WPI; 1993-117208/12.
DR N-PSDB; AAQ38733.
XX Morphogen-induced modulation of inflammatory response and resulting
PT tissue damage, e.g. in autoimmune diseases, diabetes, asthma, ischaemia
PT reperfusion injury, etc.
XX
XX Claim 26; Page 112-113; 165pp; English.
XX
CC Human osteogenic protein (OP)-1 is a preferred morphogen for use in
CC treating tissue damage in e.g. inflammatory disease, autoimmune disease,
CC arthritis, psoriasis, dermatitis, diabetes and emphysema. Proteins having
CC at least 60% homology with amino acids 43-139 of the mature hOP-1 can
CC also be used. See also AAR3398. (updated on 09-JAN-2003 to add missing
CC OS field.) (updated on 25-MAR-2003 to correct PN field.)
XX
SQ Sequence 431 AA;
Query Match 100.0%; Score 11; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Cy 1 INPEYKPCAPLTOLNAIS 20
Db 386 INPEYKPCAPLTOLNAIS 405
RESULT 108
AAR33905
XX ID AAR33905 standard; protein; 431 AA.
XX AAR33905;
XX 25-MAR-2003 (revised)
DT 21-JUL-1993 (first entry)
XX
DE Human osteogenic protein 1 (hOP-1).
XX
XX Bone; loss; increase; fracture; post-menopausal; senile; osteoporosis;
XX hyperparathyroidism; skeletal microstructure defects;
XX chronic renal failure; kidney disease; osteomalacia, vitamin D;
XX deficiency-induced osteopenia, osteoporosis; Paget's disease; bone mass;
XX imbalance; resorption; formation; dialysis; calcium; phosphate;
XX metabolism.
XX
XX Homo sapiens.
OS
XX Key Location/Qualifiers
FH Region 30..292
FT /note="Pro region, cleaved to yield mature, active
FT protein
FT 293..431
FT /note="mature protein"
FT Region 330..431
FT /note="conserved seven cysteine skeleton"
XX
XX MO9305751-AA2.
XX
XX 01-APR-1993.
XX
XX 28-AUG-1992; 92WC-US007432.
XX
XX 30-AUG-1991; 91US-00752764.
PR 30-AUG-1991; 91US-00752857.
PR 30-AUG-1991; 91US-00752861.
PR 31-JUL-1992; 92US-00922780.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Kuberasingh T, Cohen CM, Oppermann H, Ozkaynak E, Rueger DC;
PI Paag RHL, Smart JE;
XX
XX WPI; 1993-117208/14.
DR

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XX		Use of morphogenic or In-vivo morphogenic-stimulating agent - to prevent bone loss or increase, used for treating bone fractures, post-menopausal or senile osteoporosis, hyperparathyroidism etc.
PT		
XX		
PS		Disclosure; Page 108-110; 16pp; English.
CC		
CC		The sequence is that of human osteogenic protein 1 (hOP-1) a
CC		morphogenically active protein which may be used as part of a method for
CC		treating a bone fracture or a disease which causes or results in bone
CC		fractures or other defects in skeletal microstructure. Such diseases
CC		include chronic renal failure and other kidney diseases, osteomalacia,
CC		vitamin D deficiency-induced osteopenia or osteoporosis, postmenopausal
CC		or senile osteoporosis, hyperparathyroidism and Paget's disease. The
CC		methods can be used for protecting individuals at risk for loss of bone
CC		mass such as postmenopausal females, aged individuals and individuals
CC		undergoing dialysis. The loss of bone mass may result from an imbalance
CC		in bone resorption or bone formation, an imbalance of calcium or
CC		phosphate metabolism, a vitamin D imbalance or be nutritionally or
CC		hormonally induced. (Updated on 25-MAR-2003 to correct PN field.)
SO		Sequence 431 AA;
Query Match		100.0%; Score 111; DB 2; Length 431;
Best Local Similarity		100.0%; Pred. No. 1.8e+06;
Matches	20;	Conservative 0; Mismatches 0; Indels 0; Gaps 0.
Dy		
Db		
	1 INPETYKPCCAPTQLNMAIS 20	
	386 INPETYKPCCAPTQLNMAIS 405	
RESULT 109		
AAR36734		
ID AAR36734 standard; protein; 431 AA.		
AC AAR36734;		
DT 25-MAR-2003 (revised)		
DT 13-SEP-1993 (first entry)		
DE Human BMP-7.		
XX		
KM Bone morphogenetic protein; bone defect treatment; healing; wound; injury; tissue repair; osteoporosis; burns; incisions; ulcers; neutrol survival increase; fracture reduction; cartilage growth; induction.		
OS Hemo sapiens.		
PN MO9309229-A1.		
PD 13-MAY-1993.		
PF 02-NOV-1992; 92WO-US009430.		
PR 04-NOV-1991; 91US-00787496. 07-APR-1992; 92US-00864692.		
PA (GEMV ) GENETICS INST INC.		
PI Israel D, Wolfman NM;		
DR WPI; 1993-167696/20. N-PDB; AAQ41293.		
PT Recombinant hetero-dimeric BMP proteins - are useful in treating bone defects, healing bone injury and in wound healing.		
PS Disclosure; Fig 3; 16pp; English.		
CC		The sequence is that of the human bone morphogenetic protein BMP-7. It may be used in the prodn. of a recombinant heterodimeric protein having

CC bone stimulating activity. This heterodimer comprises BMP-2 or BMP-4 or a  
CC fragment in association with a second protein or fragment, BMP-7. It may  
CC be used in compans. for wound healing, tissue repair, and in similar  
CC compans. which have been indicated for the use of individual BMPs.  
CC Increased potency of the heterodimer over individual BMPs may permit  
CC lower dosages to be administered. A heterodimeric protein which induces  
CC cartilage and/or bone growth in circumstances where bone is not normally  
CC formed, has applications in the healing of bone fractures and cartilage  
CC defects in humans and other animals. The heterodimer may have  
CC prophylactic use in closed as well as open fracture reduction and also in  
CC the improved fixation of artificial joints. De novo bone formation  
CC induced by an osteogenic agent contributes to the repair of congenital,  
CC trauma induced or oncologic resection induced craniofacial defects, and  
CC is also useful in cosmetic plastic surgery. It may be used in the  
CC treatment of periodontal disease and in other tooth repair processes. It  
CC may also be useful in the treatment of osteoporosis, wound healing (e.g.  
CC burns, incisions and ulcers) and related tissue repair, and may increase  
CC neuronal survival and be useful in the transplantation and treatment of  
CC conditions exhibiting a decrease in neuronal survival. It may be combined  
CC with other agents beneficial to the bone and/or cartilage defect, wound  
CC or tissue in question, e.g. BGF, PDGF, TGF-alpha, TGF-beta and insulin-  
CC like growth factor (Updated on 25-MAR-2003 to correct PN field.)

XX SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 110

AAR54935 standard; protein; 431 AA.

XX AAR54935;

XX 25-MAR-2003 (revised)

XX 15-OCT-1994 (first entry)

XX Osteogenic protein hOP1-PP.

XX Morphogenic protein; hOP-1-PP; OP-1; hOP1; hOP-1; tissue morphogenesis;

XX osteogenic protein.

XX Homo sapiens.

XX W09410203-A2.

XX 11-MAY-1994.

XX 02-NOV-1993; 93WO-US010520.

XX 03-NOV-1992; 92US-00971091.

XX 04-MAR-1993; 93US-00029335.

XX 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Oppermann H, Okaynak E, Kuberassampath T, Rueger DC, Pang RHL;

XX Cohen CM;

XX WPI; 1994-167392/20.

XX N-PSDB; AAQ65391.

XX A morphogenetically active protein MCP-3 - for inducing tissue

XX morphogenesis in mammals.

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CC A novel mouse morphogenic protein, OP3, has the sequence given in.  
CC AAR54935, and is encoded by cDNA of sequence AAQ65390. cDNA and protein  
CC sequences were also provided for human osteogenic protein OP1 (AAQ65391),  
CC AAR54935), mouse OP1 (AAQ65392, AAR54936), human OP2 (AAQ65393, AAR54937)  
CC and mouse OP2 (AAQ65394, AAR54938), as well as the genomic DNA sequence  
CC of human OP2 (AAQ65395). Generic sequences given in AAR54939-40  
CC accommodate homologies between OP1, OP2, OP3 and other morphogen protein  
CC family members. (Updated on 25-MAR-2003 to correct PN field.)

XX SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 111

AAR46731 standard; protein; 431 AA.

XX AAR46731;

XX 25-MAR-2003 (revised)

XX 25-AUG-1994 (first entry)

XX Human osteogenic pro-protein hOP1.

XX human osteogenic protein; hOP1; morphogen; infant food formulation;

XX tissue morphogenesis; tissue development; bone growth;

XX morphogen-enriched nutritional product.

XX Homo sapiens.

XX W09403075-A2.

XX 17-FEB-1994.

XX 29-JUL-1993; 93WO-US007190.

XX 31-JUL-1992; 92US-00923780.

XX 16-SEP-1992; 92US-00946235.

XX 04-MAR-1993; 93US-00029335.

XX 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Kuberassampath T, Cohen CM, Rueger DC, Oppermann H, Pang RHL;

XX WPI; 1994-065304/08.

XX N-PSDB; AAQ57916.

XX Morphogen enriched dietary compositions and infant formula - capable of

XX enhancing tissue morphogenesis; development and viability, e.g. in

XX infant, aged individuals and metabolic disorders, e.g. anorexia nervosa,

XX etc.

XX

XX

CC Claim 32; Page 110-112; 160pp; English.

XX

This sequence is the pro form of human osteogenic protein hOP1. The

CC mature hOP1 and proteins having at least 70% homology with it are

CC preferred morphogens for inclusion in new morphogen-enriched nutritional

CC formulations. The formulations are dietary compositions suitable for

CC people at risk for tissue damage due to protein energy malnutrition or to

CC altered metabolism function and infant formulations to enhance tissue

CC development in an infant or juvenile. (Updated on 25-MAR-2003 to correct

CC PN field.)

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Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 386 INPETHKPCCAPTOLNAIS 405

## RESULT 112

AA050198  
 ID AA050198 standard; protein; 431 AA.

AC AA050198;

DT 25-MAR-2003 (revised)

DT 11-OCT-1994 (first entry)

XX Human OP-1.

XX OP-1; OP-2; BMP2; Vg1(fx); Vgr(fx); DPP(fx); GDF-1(fx); 60A(fx);  
 KM BMP5(fx); BMP6(fx); BMP6(fx); osteogenic protein; morphogen;  
 KM morphogenic protein; gastrointestinal tract; luminal lining;  
 KM epithelial cell; proliferation; ulcer, lesion; inflammation;  
 KM regeneration; tissue.

XX Homo sapiens.

PN W09406420-A2.

XX 31-MAR-1994.

XX 15-SEP-1993; 93WO-US008885.

XX 15-SEP-1992; 92US-00945286.

XX 04-MAR-1993; 93US-00029335.

XX 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Cohen CM, Charette MF, Kuberasampath T, Rueger DC, Oppermann H;  
 PI Pang RHL, Ozkaynak E, Smart JB;

XX WPI: 1994-118121/14.

XX N-PSDB; AA045116.

XX Maintaining integrity of gastrointestinal lining using a morphogen  
 PT (stimulant) - for treating or preventing ulceration, also to inhibit  
 PT endothelial cell proliferation and reduce side effects of cancer therapy.

XX Claim 35-36; Page 102-104; 15pp; English.

XX Morphogens comprising an amino acid sequence sharing at least 70%  
 CC homology with OP-1, OP-2, BMP2, BMP3(fx), Vg1(fx), Vgr(fx), DPP(fx), GDF-  
 CC -1(fx), 60A(fx) and at least 80% homology with BMP5(fx) and BMP6(fx) are  
 CC useful for maintaining the integrity of the gastrointestinal tract  
 CC luminal lining in a mammal, including (1) limiting epithelial cell  
 CC proliferation, (2) inhibiting ulcerative lesion formation, (3) inhibiting  
 CC inflammation normally associated with ulcerative diseases, and/or (4) the  
 CC stimulating the repair of ulcerative lesions and the regeneration of the  
 CC luminal tissue. Morphogens having at least 60% homology with residues 43-  
 CC 139 of mature hOP1 are included (claim 37-39). (Updated on 25-MAR-2003 to  
 CC correct PN field.)

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 DB 386 INPETHKPCCAPTOLNAIS 405

## RESULT 113

AA051644  
 ID AA051644 standard; protein; 431 AA.

AC AA051644;

DT 25-MAR-2003 (revised)

DT 01-JUL-2002 (revised)

DT 08-JUN-1995 (first entry)

XX hOP1 human osteogenic protein 1.

XX hOP1; human osteogenic protein; osteoarthritis; orthogenesis;  
 KM non-union fracture repair; allograft repair;  
 KM cartilage and endochondral bone formation;  
 KM periodontal, dental and craniofacial reconstruction.

XX Homo sapiens.

PN US5354557-A.

PD 11-OCT-1994.

PF 18-DEC-1992; 92US-00993387.

XX 08-APR-1988; 88US-00179406.

XX 15-AUG-1988; 88US-00232630.

XX 23-FEB-1989; 89US-00315342.

XX 17-OCT-1989; 89US-00422613.

XX 17-OCT-1989; 89US-00422613.

XX 22-FEB-1990; 90US-00483913.

XX 20-AUG-1990; 90US-0056920.

XX 07-SEP-1990; 90US-00579865.

XX 18-OCT-1990; 90US-00595543.

XX 18-OCT-1990; 90US-00600024.

XX 21-NOV-1990; 90US-00616374.

XX 04-DEC-1990; 90US-00621849.

XX 22-FEB-1991; 90US-00621849.

XX 20-DEC-1991; 91US-00660162.

XX 28-JAN-1992; 92US-00810560.

XX 21-FEB-1992; 92US-00827052.

XX (STYC) STRYKER CORP.

XX Rueger DC, Kuberasampath T, Ozkaynak E, Oppermann H;

XX WPI: 1994-324521/40.

XX N-PSDB; AA072703.

XX Implantable device for inducing osteogenesis - comprises porous matrix  
 PT conng. non-glycosylated dimeric, disulphide linked osteogenic protein.

XX Claim 15; Col 63-68; 128pp; English.

XX AA072703 encodes AA051644 human osteogenic protein 1 (hOP1), fragments of  
 CC this protein consisting of residues 335-431, 318-431, 293-431, 300-431,  
 CC 313-431, 315-431 and 316-431; are unglycosylated osteogenic polypeptides.  
 CC Any two of these polypeptides can be disulphide bonded to form a dimer,  
 CC which forms an essential component of an osteogenic protein. This protein  
 CC is dispersed in a biodegradable matrix which can be implanted into a  
 CC mammalian bone marrow cavity, here it can induce local cartilage, bone  
 CC and endochondral bone formation; and it can also accelerate allograft  
 CC repair. This implant has the advantage of inducing all stages of bone  
 CC formation and of having a higher specific activity than other known  
 CC biohydraulic materials. The implant can be used to repair non-union  
 CC fractures and cartilage, treat osteoarthritis, and aid in periodontal,  
 CC dental or craniofacial reconstruction. (Updated on 01-JUL-2002 to add  
 CC missing PA field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated  
 CC on 25-MAR-2003 to correct PR field.)

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
 |||  
 DB 386 INPETYKPCCAPTOLNAIS 405

RESULT 114

ID AAR60577 standard; protein; 431 AA.

AC AAR60577;

DT 25-MAR-2003 (revised)

DT 30-MAR-1995 (first entry)

DE Osteogenic protein OP1.

KM Osteogenic protein.

OS Homo sapiens.

FH Key location/Qualifiers

FT Cleavage-site 289..292

FT Protein /note= "proteolytic cleavage site"

FT 293..431

XX W09420539-A1.

XX 15-SEP-1994.

XX 04-MAR-1994; 94WO-US002335.

XX 04-MAR-1993; 93US-00027070.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Rueger DC, Jones WK, Tucker RF, Oppermann H, Ozkaynak E;

XX Sampath KT;

XX WPI; 1994-302971/37.

XX N-PSDB; AAQ71425.

XX Binding partners, esp. antibodies, specific for different forms of

XX osteogenic protein - for differentiating between mature and soluble

XX complexed forms of the protein in culture media or serum.

XX Disclosure; Page 46-47; 70pp; English.

XX The osteogenic protein is produced recombinantly in mammalian cell

XX cultures, and may be provided to a site for bone induction in a mammal

XX with a suitable matrix to allow infiltration, proliferation and

XX correct PN field.) (Updated on 25-MAR-2003 to

XX correct PN field.)

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
 |||  
 DB 386 INPETYKPCCAPTOLNAIS 405

RESULT 115

AAR47290

ID AAR47290 standard; protein; 431 AA.

AC AAR47290;

DT 25-MAR-2003 (revised)

DT 02-SEP-1994 (first entry)

DE hOP1.

KM Human; hippocampus; osteogenic protein; OP-1; hOP-1; mature; injury;

KM survival; neural cell; morphogen; chemical; mechanical; neuropathy;

KM transected nerves; demyelinated cell; toxin; ethanol; Parkinsons;

KM Alzheimers; Huntingtons chorea; amyotrophic lateral sclerosis;

KM multiple sclerosis; neoplastic lesion; central nervous system; CNS;

KM retinoblastoma; glial cell neoplasm; redifferentiation; neuroblastoma;

KM peripheral nervous system; neurite; outgrowth; cell aggregation;

KM cell adhesion; axonal; nerve regeneration; vascularisation;

KM myelin sheath.

OS Homo sapiens.

PN WO9403200-A1.

PD 17-FEB-1994.

PF 29-JUL-1993; 93WO-US0067231.

PR 31-JUL-1992; 92US-00922813.

PR 04-MAR-1993; 93US-00029335.

PR 31-MAR-1993; 93US-00040510.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Rueger DC, Kuberampath T, Oppermann H, Ozkaynak E, Pang RHL;

XX Cohen CM;

XX WPI; 1994-065399/08.

XX N-PSDB; AAQ56231.

XX Using morphogens to improve survival of neural cells - also stimulating

XX re-differentiation in transformed cells and prodn. of adhesion molecules,

XX for treating traumatic injury, neuropathy and nerve cell cancers, etc.

XX Claim 23; Page 122-124; 176pp; English.

XX This sequence represents the human hippocampus derived protein,

XX osteogenic protein, hOP-1. The mature OP-1 protein was used in the method

XX as this, can be used to treat (protect) cells which have suffered

XX chemical or mechanical injury, eg. transected nerves; demyelinated cells;

XX cells exposed to toxins such as ethanol, and cells at risk because of

XX neuropathies (such as Parkinsons and Alzheimers diseases; Huntingtons

XX chorea; amyotrophic lateral sclerosis or multiple sclerosis); or because

XX of neoplastic lesions (esp. retino- blastoma or glial cell neoplasms). At

XX risk cells can be in the central or peripheral nervous systems. When used

XX to induce redifferentiation, morphogens such as this, are used to treat

XX neuroblastoma and then induce formation of neurite outgrowth, cell

XX aggregation and/or cell adhesion. These proteins stimulate complete

XX axonal nerve regeneration, including vascularisation and reformation of

XX the myelin sheath. Nerves can be regenerated over long distances, eg.

XX greater than 10mm. (Nerves can be regenerated over long distances, eg.

XX on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct

XX PI field.)

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
 |||  
 DB 386 INPETYKPCCAPTOLNAIS 405

ID	AA	AA50236 standard; protein; 431 AA.
XX	AA50236;	
XX	25-MAR-2003 (revised)	
XX	11-OCT-1994 (first entry)	
XX	Human OP-1.	
XX	OP-1; OP-2; CBMP2; Vg1(fx); Vgr(fx); DPP(fx); GDF-1(fx); 60A(fx);	
XX	BMP3(fx); BMP5(fx); BMP6(fx); osteogenic protein; morphogen;	
XX	morphogenic protein; liver; regeneration; injury; cancer; integration;	
XX	transplant; gene therapy; hepatic tissue.	
XX	Homo sapiens.	
XX	Key	Location/Qualifiers
XX	Region	335..431
XX	FT	/note="amino acids 43-139 of mature human OP-1, see
XX	FT	claim 43-44"
XX	PN	MO3406449-A2.
XX	PD	31-MAR-1994.
XX	PF	16-SEP-1993; 93WO-US008908.
XX	PR	16-SEP-1992; 92US-00946238.
XX	PR	04-MAR-1993; 93US-00029335.
XX	PR	31-MAR-1993; 93US-00040510.
XX	PA	(CREA-) CREATIVE BIOMOLECULES INC.
XX	PI	Kuberaampath T, Rueger DC, Oppermann H, Pang RHL, Cohen CM;
XX	PI	Ozkaynak E, Smart JE;
XX	DR	WPI; 1994-118148/14.
XX	DR	N-PSDB; AAQ45162.
XX	PT	Use of morphogen(s) to induce liver regeneration - for repair of injury,
XX	PT	treatment of cancer etc., also to improved integration of transplant
XX	PT	tissue, in gene therapy etc.
XX	PS	Claim 42-42; Page 125-127; 176pp; English.
XX	CC	Morphogens comprising an amino acid sequence sharing at least 70%
XX	CC	homology with OP-1, OP-2, CBMP2, Vg1(fx), Vgr(fx), DPP(fx), GDF-1(fx),
XX	CC	60A(fx) are useful for maintaining liver function in a mammal, including
XX	CC	means for regenerating lost or damaged hepatic tissue, means for
XX	CC	enhancing viability and integration of hepatic tissue and organ
XX	CC	transplants, and means for correcting liver function deficiencies,
XX	CC	including means for enhancing diminished liver function due to tissue
XX	CC	injury or disease. Morphogens having at least 60% homology with residues
XX	CC	43-139 of mature hOP1 are included (claim 43-44). Use of BMP3(fx),
XX	CC	BMP5(fx) and BMP6(fx) are included in the disclosure. (Updated on 25-MAR-
XX	CC	2003 to correct PN field.)
XX	SQ	Sequence 431 AA;
XX	Query Match	100.0%; Score 111; DB 2; Length 431;
XX	Best Local Similarity	100.0%; Pred. No. 1.8e-06;
XX	Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX	CY	1 INPETHKPCCAPTQNLNLS 20
XX	DB	386 INPETHKPCCAPTQNLNLS 405

AA057971	ID	AA057971 standard; protein; 431 AA.
XX	AC	AA057971;
XX	DT	25-MAR-2003 (revised)
XX	DT	11-OCT-1994 (first entry)
DE	XX	Human OP-1.
XX	KW	OP-1; OP-2; CBMP2; Vg1(fx); Vgr(fx); DPP(fx); GDF-1(fx); 60A(fx); BMP3(fx); BMP5(fx); BMP6(fx); tooth socket; alveolus; osteogenic protein; morphogen; morphogenic protein; periodontal tissue; regeneration; tooth implant; integration; inhibition.
XX	OS	Homo sapiens.
XX	FH	Key
XX	FT	Region
XX	FT	/note= "amino acids 43-139 of mature human OP-1, see claim 30-32"
XX	PV	WO9406399-A1.
XX	PD	31-MAR-1994.
XX	PF	15-SEP-1993; 93WO-US008742.
XX	PR	15-SEP-1992; 92US-00945285.
XX	PR	04-MAR-1993; 93US-00029335.
XX	PR	31-MAR-1993; 93US-00040510.
PA	(CREA-)	CREATIVE BIOMOLECULES INC.
PI	Kuberasampath T, Rueger DC, Oppermann H, Cohen CM, Pang RHL,	
PI	Smart JE, Ozkaynak E;	
DR	WI; 1994-118107/14.	
N-PSDB; AAO67311.		
XX	Morphogen-induced periodontal tissue regeneration - used in integrating as implanted tooth in tooth socket or to inhibit tissue loss associated with periodontal disease or injury.	
PT	Claim 28-29; Page 86-89; 132pp; English.	
PS	Morphogens comprising an amino acid sequence sharing at least 70% homology with OP-1, OP-2, CBMP2, Vg1(fx), Vgr(fx), DPP(fx), GDF-1(fx), 60A(fx) and at least 80% homology with BMP3(fx), BMP5(fx) and BMP6(fx) are useful for integrating an implanted tooth in a tooth socket and for inhibiting tissue loss associated with periodontal disease or injury.	
CC	Morphogens having at least 60% homology with residues 43-139 of mature hOp1 are included (claim 30-32). (Updated on 25-MAR-2003 to correct PN field.)	
CC	Sequence 431 AA;	
SQ		
Query Match	100.0%; Score 111; DB 2; Length 431;	
Best Local Similarity	100.0%; Pred. NO.1.8e-06;	
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
OY	1 INPETHPCCAPTQLNAIS 20 	
Db	386 INPETHPCCAPTQLNAIS 405	
RESULT 118		
AAR47250	ID	AAR47250 standard; protein; 431 AA.
XX	AC	AAR47250;
XX	DT	25-MAR-2003 (revised)



DT 15-AUG-1994 (first entry)  
 XX  
 DE hOPI.  
 XX Human; hippocampus; osteogenic protein; OP-1; subunit; dimer;  
 KW morphogenic activity; cysteine; morphogen; family; pro-region; complex;  
 KM soluble; aqueous solvent; therapeutic composition; symptom-alleviating;  
 KW co-factor; antibody; diagnosis; assay; quantitate; mature.  
 XX Homo sapiens.  
 OS  
 XX  
 XX Key Location/Qualifiers  
 FH Peptide 30..292  
 FT /note="Pref. Pro-region, Claim 8"  
 FT Peptide 30..48  
 FT /note="Pref. Pro-region, Claim 8"  
 FT Peptide 48..292  
 FT /note="Pref. Pro-region, Claim 8"  
 XX  
 XX WO9403600-A1.  
 XX  
 PD 17-FEB-1994.  
 XX  
 PF 29-JUL-1993; 93WO-US007189.  
 XX  
 PR 31-JUL-1992; 92US-00923780.  
 PR 04-MAR-1993; 93US-00029335.  
 PR 31-MAR-1993; 93US-00040510.  
 XX  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 PA Jones WK, Tucker RF, Rueger DC, Oppermann H, Ozkaynak E,  
 PI Kuberasampath T;  
 XX WPI; 1994-065689/08.  
 DR N-PSDB; AAQ56198.  
 XX  
 PT Morphogenic protein soluble complex - for regeneration of tissue in  
 PT mammals and diagnosing tissue disorders.  
 XX  
 PS Claim 3; Page 60-63; 120pp; English.  
 XX  
 CC This sequence represents the human hippocampus derived protein,  
 CC osteogenic protein, O-PI. The mature OP-1 protein was used as at least  
 CC one subunit in the dimeric protein of the invention. This dimeric protein  
 CC comprises a pair of protein subunits which are associated to give a  
 CC structure with morphogenic activity. Each subunit comprises more than 100  
 CC amino acids having a pattern of cysteine residues characteristic of the  
 CC morphogen family. Each subunit comprises a mature form of a subunit of a  
 CC member of the morphogen family, non-covalently complexed with a peptide  
 CC comprising a pro-region of a morphogenic family member, to form a complex  
 CC more soluble in aqueous solvents than the uncomplexed subunits. The  
 CC dimeric protein is useful in a therapeutic composition, pref. also  
 CC containing a symptom-alleviating co-factor. The protein and corresponding  
 CC antibody may be used in diagnostic assays, eg. to quantitate the amount  
 CC of mature and soluble forms of morphogenic proteins produced. (Updated on  
 CC 25-MAR-2003 to correct FN field.)  
 CC  
 XX  
 XX Sequence 431 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

AC AAR85211;  
 XX  
 DT 13-FEB-1996 (first entry)  
 XX  
 DE Human osteogenic protein 1.  
 XX  
 KW OPI binding receptor; osteogenic protein 1; morphogenesis; morphogen;  
 KM ALK.  
 XX  
 XX Homo sapiens.  
 OS  
 XX  
 XX Key Location/Qualifiers  
 FH Region 1..292  
 FT /label= Prepro\_region  
 FT Protein 293..431  
 FT /label= Mat\_protein  
 FT Domain 330..431  
 FT /label= C-terminal\_cysteine\_domain  
 XX  
 XX WO9530003-A2.  
 XX  
 PD 09-NOV-1995.  
 XX  
 PF 28-APR-1995; 95WO-US005467.  
 XX  
 PR 29-APR-1994; 94US-00236428.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 PA (LUDW-) LUDWIG INST CANCER RES.  
 XX  
 PI Dijke FT, Miyazano K, Sampath KT, Heldin C;  
 XX WPI; 1995-393076/50.  
 DR N-PSDB; AAT06038.  
 XX  
 PT Identifying osteogenic protein-1 receptor-binding analogue - useful in  
 PT the design of morphogen agonists and antagonists for therapeutic.  
 PT diagnostic and experimental purposes.  
 XX  
 PS Claim 12; Page 78-80; 95pp; English.  
 XX  
 CC cDNA encoding the human osteogenic protein 1 (OP1) is given in AAT06038.  
 CC The encoded protein (AAR85210) is used to isolate OPI binding receptors  
 CC ALK-2, ALK-3 and ALK-6 (see AAR85206, AAR85207, AAR85209, respectively)  
 XX  
 XX Sequence 431 AA;  
 SQ  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 120  
 AAM00236  
 ID AAM00236 standard; protein; 431 AA.  
 XX  
 AC AAM00236;  
 XX  
 DT 21-NOV-1996 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 KW Morphogen; osteogenic protein; dentine; tooth decay; caries;  
 KM morphogenesis; odontoblast; OP-1.  
 XX  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH Peptide 1..29

RESULT 119  
 AAR85211  
 ID AAR85211 standard; proein; 431 AA.  
 XX

```

FT      Region      /label= Sig_peptide
FT      30..292
FT      /label= Pro_region
FT      293..431
FT      Protein      /label= Mat_protein
FT      330..431
FT      Domain      /label= 7-Cys_C-terminal_domain
XX      PN      WO9626737-A1.
XX      PD      06-SEP-1996.
XX      XX      WO9626737-A1.
XX      PF      14-FEB-1996; 96WO-US002169.
XX      PR      01-MAR-1995; 95US-00396930.
XX      PA      (CREA-) CREATIVE BIOMOLECULES INC.
XX      PI      Charette MF, Rutherford RB;
XX      PS      WPI; 1996-412583/41.
XX      DR      N-PSDB; AAT33441.
XX      PT      Use of morphogen(s), e.g. osteogenic proteins, on dental surfaces - for
XX      PT      inducing dentine morphogenesis, desensitising teeth or sealing tooth
XX      PT      cavities.
XX      PS      Disclosure; Page 50-52; 106pp; English.
XX      CC      Human hippocampus full-length osteogenic protein OP-1 (AA00236) includes
XX      CC      a pro-sequence and the morphogenetically active mature protein sequence
XX      CC      (see also AA000221) that includes a 7-Cys C-terminal domain. OP-1 can be
XX      CC      expressed from intact or truncated cDNA (AAT33441) in prokaryotic or
XX      CC      eukaryotic host cells. Mature OP-1 and other morphogens (see also
XX      CC      AA00222-35) are used to induce dentine morphogenesis, to seal dental
XX      CC      cavities and to desensitize teeth to pressure and/or temp
XX      SQ      Sequence 431 AA;

Query Match      100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHPKCCAPTQLNALIS 20
DB      386 INPETHPKCCAPTQLNALIS 405

RESULT 121
AAR87537
ID      AAR87537 standard; protein; 431 AA.
XX      AC      AAR87537;
XX      DT      15-OCT-1995 (first entry)
XX      DE      Human osteogenic protein OP-1.
XX      KW      Osteogenic protein; OP-1; cartilage; bone; skeleton; joint;
XX      KW      articular cartilage; replacement body part.
XX      OS      Homo sapiens.
XX      PN      WO9533502-A1.
XX      PD      14-DEC-1995.
XX      PF      02-JUN-1995; 95WO-US006724.
XX      PR      03-JUN-1994; 94US-00253398.
XX      PA      (CREA-) CREATIVE BIOMOLECULES INC.
XX      FT

```

```

PI      Khouri RK, Sampath KT, Rueger DC;
XX      XX      WPI; 1996-039987/04.
XX      DR      N-PSDB; AAT06771.
XX      PT      Device for in-vivo production of autogenous replacement body parts -
XX      PT      comprises matrix coated with osteogenic protein, for infiltration of
XX      PT      cells, partic. for replacement or repair of cartilage in skeletal joints.
XX      PS      Disclosure; Page 34-36; 51pp; English.
XX      CC      This is osteogenic protein OP-1 which may be on the surface of a
XX      CC      biocompatible, biodegradable matrix that allows attachment of
XX      CC      infiltrating cells and comprises residues specific for various tissue
XX      CC      types. This device is used for the in vivo replacement of articular
XX      CC      cartilage or non-mineralised (especially avascular) tissue in skeletal
XX      CC      joints.
XX      SQ      Sequence 431 AA;

Query Match      100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHPKCCAPTQLNALIS 20
DB      386 INPETHPKCCAPTQLNALIS 405

RESULT 122
AAR8757
ID      AAR8757 standard; protein; 431 AA.
XX      AC      AAR8757;
XX      DT      25-MAR-2003 (revised)
XX      DT      19-JUN-1996 (first entry)
XX      DE      hOP-1.
XX      KW      Human; osteogenic protein; hOP-1; murine; hOP-1; TGF-beta superfamily;
XX      KW      transforming growth factor-beta; dimer; antibody; epitope; hippocampus;
XX      KW      purification; implantable osteogenic device; bone formation; craniofacial;
XX      KW      anomaly; skeletal; dental; endochondral bone formation;
XX      KW      non-union fracture; cartilage repair; osteoarthritis.
XX      OS      Homo sapiens.
XX      FH      Key
XX      FT      Peptide      Location/Qualifiers
XX      FT      1..293
XX      FT      /note= "Prepro-peptide"
XX      FT      1..29
XX      FT      Peptide      /note= "hOP-1 peptide, claim 2"
XX      FT      30..292
XX      FT      /note= "hOP-1 peptide, claim 2"
XX      FT      Peptide      /note= "hOP-1 peptide, claim 2"
XX      FT      293..431
XX      FT      /label= OP1-18Ser
XX      FT      /note= "N-terminally truncated mature hOP-1 protein
XX      FT      species; N-terminal residue is Ser, opt. designated OP-
XX      FT      18, claim 3"
XX      FT      294..431
XX      FT      /note= "Mature hOP-1"
XX      FT      318..431
XX      FT      /label= OP1-16Val
XX      FT      /note= "N-terminally truncated mature hOP-1 protein
XX      FT      species; N-terminal residue is Val, claim 3"
XX      FT      330..431
XX      FT      /label= OP7
XX      FT      /note= "hOP-1 protein species defining the conserved 7
XX      FT      Cys skeleton in the active region, claim 1"
XX      FT      335..431
XX      FT      /label= OPS
XX      FT      /note= "hOP-1 protein species defining the conserved 6

```

FT Cys skeleton in the active region (S stands for short),  
 claim 1"

XX US5468845-A.  
 XX 21-NOV-1995.  
 PD  
 XX  
 PF 01-NOV-1993; 93US-00147023.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00595543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PA  
 XX (STYC) STRYKER CORP.  
 PI Rueger DC, Kuberasampath T, Oppermann H, Ozkaynak E;  
 XX  
 DR WPI; 1996-010159/01.  
 DR N-PSDB; AAT02597.  
 XX  
 PT Antibodies with osteogenic protein binding specificity - used in  
 PT purification of osteogenic proteins, and as antigenic proteins.  
 XX  
 PS Disclosure; Col 63-68; 129pp; English.

XX This sequence represents the human osteogenic protein, hOP-1. hOP-1 has  
 CC homology with proteins in the TGF-beta superfamily. Fragments of the hOP-  
 CC 1 protein can be used in the production of dimeric peptides which may be  
 CC used in the generation of antibodies with binding specificities for  
 CC osteogenic proteins. The antibodies are capable of binding specifically  
 CC to an epitope of the osteogenic protein and may be used in purification  
 CC protocols. Osteogenic proteins, such as hOP-1, may be used in an  
 CC implantable osteogenic device which allows predictable bone formation to  
 CC correct acquired and congenital craniofacial and other skeletal or dental  
 CC anomalies. They may be used to induce local endochondral bone formation  
 CC in non-union fractures and in other clinical applications including  
 CC dental and periodontal applications where bone formation is required.  
 CC Other potential applications include cartilage repair, e.g. in the  
 CC treatment of osteoarthritis. The cDNA encoding this sequence was isolated  
 CC from human hippocampal tissue. (Updated on 25-MAR-2003 to correct PF  
 CC field.) (Updated on 25-MAR-2003 to correct PR field.)  
 CC  
 XX Sequence 431 AA;  
 SQ

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQAINAIS 20  
 DB 386 INPETHKPCCAPTQAINAIS 405

RESULT 123  
 AAM16365  
 ID AAM16365 standard; protein; 431 AA.  
 XX  
 AC AAM16365;  
 XX

DT 25-MAR-2003 (revised)  
 DT 26-AUG-1997 (first entry)  
 XX  
 DE Human hippocampal osteogenic protein 1.  
 XX  
 XX Human; osteogenic protein; hippocampus; soluble; ligand; antibody;  
 XX mature; non-covalent; dimeric; bone morphogenetic protein; purity;  
 XX therapeutic.  
 XX  
 OS Homo sapiens.  
 XX  
 EN US5610021-A.  
 XX  
 PD 11-MAR-1997.  
 XX  
 PF 04-MAR-1994; 94US-00206864.  
 XX  
 PR 21-FEB-1992; 92US-00841646.  
 PR 04-MAR-1993; 93US-00027070.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 PI Tucker RF, Oppermann H, Ozkaynak E, Rueger DC, Sampath KT;  
 PI Jones WK;  
 XX  
 DR WPI; 1997-178399/16.  
 DR N-PSDB; AAT73207.  
 XX  
 PT Antibody specific for soluble form of osteogenic protein - for quality  
 PT control and diagnostic use.  
 XX  
 PS Disclosure; Col 19-22; 20pp; English.

XX This is the amino acid sequence of the human osteogenic protein 1 (OP1)  
 CC derived from hippocampal tissue. The invention relates to a novel soluble  
 CC form of this protein and of OP2 (AAM16366), and especially to ligands  
 CC binding these proteins, e.g. poly- or monoclonal antibodies. The ligands  
 CC are especially able to differentiate between the soluble and mature forms  
 CC of these proteins. The soluble forms of the proteins preferably comprises  
 CC the C-terminal 6 or 7 Cys residues (i.e. for OP1 residues 335-431 (6 Cys)  
 CC or 330-341 (7 Cys)). The soluble complex comprises a pro domain of the  
 CC protein non-covalently linked to a dimeric form of the osteogenic protein  
 CC which containing at least the soluble part of OP1 and another osteogenic  
 CC protein e.g. OP2, bone morphogenetic protein (BMP)-2, -3, -4, -5, -6 or -  
 CC 9. The ligand may be used to monitor the purity of therapeutic osteogenic  
 CC protein preparations and for diagnostic purposes. (Updated on 25-MAR-2003  
 CC to correct PF field.)  
 CC  
 XX Sequence 431 AA;  
 SQ

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQAINAIS 20  
 DB 386 INPETHKPCCAPTQAINAIS 405

RESULT 124  
 AAM40190  
 ID AAM40190 standard; protein; 431 AA.  
 XX  
 AC AAM40190;  
 XX  
 DT 08-JUN-1998 (first entry)  
 XX  
 DE Human OP-1 protein.  
 XX  
 XX Osteogenic protein; OP-1; bone morphogenetic protein; OP/BMP family;  
 XX chronic renal failure; renal therapeutic agent; disease; diabetes;  
 XX nephropathy; glomerulopathy; hypertrophy; sclerosis; nephritis; human;  
 XX dysplasia; fibrosis; glomerular filtration rate; GFR.

```

XX OS Homo sapiens.
XX FH Key
XX FT Peptide 1..29
XX FT Peptide /label= signal
XX FT Peptide 30..292
XX FT Protein /label= propeptide
XX FT Protein 293..431
XX FT Protein /label= OP-1
XX PN W09741881-A1.
XX PD 13-NOV-1997.
XX PF 06-MAY-1997; 97WO-US007816.
XX PR 06-MAY-1996; 96US-00643321.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Sampath KT, Cohen CM;
XX DR WPI; 1997-558690/51.
XX DR N-PSDB; AAV10345.
XX PT Treatment of chronic renal failure - using an osteogenic protein/bone
XX PT morphogenetic protein renal therapeutic agent or morphogen or renal
XX PT mesenchymal progenitor cells.
XX PS Disclosure; Page 55-56; 113pp; English.
XX CC This sequence represents the human osteogenic protein, OP-1. This protein
XX CC is used in a method for the treatment of a mammal having, or at risk of,
XX CC chronic renal failure which comprises administering an osteogenic
XX CC protein/bone morphogenetic protein (OP/BMP) renal therapeutic agent or
XX CC morphogen. The method can be used for treating e.g. chronic renal
XX CC failure, end-stage renal disease, chronic diabetic nephropathy, diabetic
XX CC glomerulopathy, diabetic renal hypertrophy, hypertensive nephrosclerosis,
XX CC hypernephrosis, glomerulonephritis, chronic glomerulonephritis, hereditary
XX CC nephritis, renal dysplasia, or a patient afflicted with e.g. glomerular
XX CC hypertrophy, tubular hypertrophy, glomerulosclerosis, tubulointerstitial
XX CC sclerosis or renal fibrosis. Such therapeutic agents can prevent, inhibit
XX CC or delay the progressive loss of functional nephron units and the
XX CC progressive decline in glomerular filtration rate (GFR) which slowly but
XX CC inevitably leads to the need for renal replacement therapy
XX SQ Sequence 431 AA:
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQNLNALS 20
DB 386 INPETHKPCCAPTQNLNALS 405
RESULT 125
AAW36853
ID AAW36853 standard; protein; 431 AA.
XX AAW36853;
XX AC AAW36853;
XX DT 25-MAR-2003 (revised)
XX DT 10-MAR-1998 (first entry)
XX Full length sequence of human osteogenic protein 1 (hOP-1).
XX Human osteogenic protein; OP; OP-1; morphogen; morphogenic protein;
XX embryogenesis; organ maintenance; tissue-specific morphogenesis;
XX arthritis; emphysema; osteoporosis; cirrhosis.
XX

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OS OS Homo sapiens.
XX FH Key
XX FT Region 30..292
XX FT Region /note= "pro region which is cleaved to yield the mature
XX FT Protein morphogenically active protein"
XX FT Protein 293..431
XX FT Protein /note= "mature protein"
XX FT Protein 330..431
XX FT Protein /note= "conserved 7 Cys skeleton"
XX PN US5650276-A.
XX PD 22-JUL-1997.
XX PF 20-JUL-1994; 94US-00278729.
XX PR 11-MAR-1991; 91US-00667274.
XX PR 30-AUG-1991; 91US-00752764.
XX PR 30-AUG-1991; 91US-00752861.
XX PR 28-AUG-1992; 92US-00938021.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Ozkaynak E, Oppermann H, Pang RH, Cohen CM, Kuberampath T;
XX PI Rueger DC, Smart JB;
XX DR WPI; 1997-384665/35.
XX DR N-PSDB; AAT97877.
XX PT Screening for compounds which modulate morphogen expression - by
XX PT incubating in the presence of epithelial cells which contain a cellular
XX PT gene for morphogenic protein expression.
XX PS Disclosure; Col 49-52; 49pp; English.
XX CC The present sequence represents a human osteogenic protein-1 (hOP-1). hOP
XX CC -1 was first found in bone tissue, and is now known to be produced at
XX CC relatively high levels in cells derived from renal or adrenal tissue. OP-
XX CC 1 proteins are a group of morphogenically active proteins. Morphogens are
XX CC inactive when reduced, but are active as oxidised homodimers and when
XX CC oxidised with other morphogens (e.g. AAW36854-62). Comparison of the
XX CC amino acid sequences of these morphogens has identified a consensus 6-7
XX CC cysteine motif at the C-terminal. Morphogenic proteins such as OP-1 play
XX CC an important role, not only in embryogenesis, but also in tissue and
XX CC organ maintenance and repair in mammals. They induce a developmental
XX CC cascade of tissue-specific morphogenesis in a mammal. A novel method is
XX CC described for screening a candidate compound for the ability to modulate
XX CC expression of a cellular gene encoding a naturally occurring morphogenic
XX CC protein. The candidate compound is incubated with epithelial cells which
XX CC express the cellular gene, and after a period of time the epithelial
XX CC cells are assayed for the presence of or the amount of the protein
XX CC expressed by the cellular gene. A change in the level of the morphogenic
XX CC protein relative to the level in the epithelial cells in the absence of
XX CC the candidate compound is indicative of the ability of the compound to
XX CC modulate expression of the cellular gene. The method can be used to
XX CC identify compounds which can increase or decrease morphogen production or
XX CC levels. Such compounds can be used in the treatment of, e.g. arthritis,
XX CC emphysema, osteoporosis, kidney disease, lung diseases, cardiomyopathy,
XX CC and cirrhosis of the liver. (updated on 25-MAR-2003 to correct PR field.)
XX SQ Sequence 431 AA:
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHKPCCAPTQNLNALS 20
DB 386 INPETHKPCCAPTQNLNALS 405
RESULT 126

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ID	AAW27508
AC	AAW27508 standard; protein; 431 AA.
XX	
XX	AAW27508;
DT	08-DEC-1997 (first entry)
DE	Human osteogenic protein 1.
XX	
KM	Human; cell surface; receptor; activin; kinase; ALK-1; osteogenic; protein; OP-1; analogue; antagonist; agonist; inhibitor; tissue growth; osteosarcoma; Paget's disease; activin; bone; morphogenetic; BMP-4; affinity purification; quantification; diagnosis; osteoporosis; aplastic bone disease; osteopenia; osteopetrosis; screening; ligand; modulation; morphogen; gene therapy; stimulation; proliferation; differentiation; probe; identification.
XX	
OS	Homo sapiens.
XX	
PN	M09707135-A2.
XX	
PD	27-FEB-1997.
XX	
PF	13-AUG-1996; 96WO-US013163.
XX	
PR	14-AUG-1995; 95US-0002313P.
PA	(CREA-) CREATIVE BIOMOLECULES INC. (LUDW-) LUDWIG INST CANCER RES.
PI	Ichijo H, Nishitoh H, Sampath KT;
DR	MP1: 1997-165245/15. N-P5DB: AAT87879.
PT	Analogue of osteogenic protein-1, receptor complex and binding partner - PT used to inhibit effects of OP-1 on responsive cells, e.g. to treat osteosarcoma and Paget's disease.
PS	Claim 1; Page 55-56; 64pp; English.
CC	The present sequence is human osteogenic protein 1 (OP-1), a novel analogue of which binds the human, cell surface receptor, activin receptor like kinase 1 (ALK-1). The analogue can be applied to an OP-1 responsive cell to antagonise OP-1 binding, or the induction of OP-1 mediated cell responses. Typical uses include the inhibition of uncontrolled differentiated tissue growth, e.g. in osteosarcoma or Paget's disease. The disclosure also contemplates the possibility of some analogues being agonists. A similar effect on OP-1 responsive cells is achieved with soluble forms of ALK-1, or an OP-1 specific analogue, and, provided that the analogue is at least 60% homologous to residues 335 to 431 of OP-1, it will also antagonise the binding of activin and bone morphogenetic protein 4 (BMP-4) to surface receptors. Other uses of the analogues include affinity purification and quantification of OP-1 and analogues, e.g. for diagnosis of osteoporosis, aplastic bone disease or osteopenia, or determination or quantification of ALK-1. ALK-1 can be used to screen for ligands that modulate endogenous morphogen receptor expression levels. Chimeric forms of ALK-1, having domains from other receptors, or cell surface molecules, can be used similarly and in gene therapy, or in combination with a specific morphogen agonist, to stimulate proliferation and differentiation of implanted cells, i.e. non- endogenous, cells. Nucleic acid probes based on the ALK-1 cDNA can be used to identify other OP-1 specific receptors, and their tissue distribution
CC	
XX	
SQ	Sequence 431 AA;
Query Match	100.0%; Score 111; DB 2; Length 431;
Best Local Similarity	100.0%; Pred. No. 1,8e+06;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

[illegible]

ID AAW53179 standard; protein; 431 AA.  
 AC AAW53179;  
 DT 17-JUL-1998 (first entry)  
 DE Human osteogenic protein (hOP)-1.  
 XX Osteogenic protein; morphogenic; epithelial cell; gene expression; human;  
 XX hOP-1.  
 XX Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FT Peptide 1..29  
 FT /note= "signal peptide"  
 FT Peptide 30..292  
 FT /note= "propeptide sequence"  
 FT Protein 293..431  
 FT /note= "mature protein sequence claimed in claim 1"  
 XX  
 XX US5741641-A.  
 XX  
 XX 21-APR-1998.  
 XX  
 XX 26-MAY-1995; 95US-00451953.  
 XX  
 XX 11-MAR-1991; 91US-00667274.  
 XX 30-AUG-1991; 91US-00752764.  
 XX 30-AUG-1991; 91US-00752861.  
 XX 28-AUG-1992; 92US-00938021.  
 XX 20-JUL-1994; 94US-00278729.  
 XX  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 XX Kuberampath T, Oppermann H, Pang RHL, Cohen CM, Ozkaynak E;  
 PI Rueger DC, Smart JE;  
 XX  
 XX WPI; 1998-260496/23.  
 XX N-PSDB; AAV19533.  
 XX  
 XX Method for identifying an epithelial cell tissue source which contains a  
 PT cellular gene for morphogenic protein expression - by incubating at least  
 PT two preparations of epithelial cells with a compound shown to modulate  
 PT morphogenic gene expression.  
 XX  
 XX Disclosure; Col 43-48; 48pp; English.  
 XX  
 XX This is a human osteogenic protein (hOP)-1 sequence. The osteogenic  
 CC proteins are morphogenically active proteins and can be used in a method  
 CC for identifying an epithelial cell tissue source in which the expression  
 CC of a cellular gene encoding a protein comprising a naturally occurring  
 CC polypeptide can be modulated with a compound shown to modulate gene  
 CC expression. The method comprises incubating the epithelial cells with the  
 CC compound until expression of the cellular gene has been modulated.  
 CC Assaying for the polypeptide where the change in the level of the  
 CC polypeptide relative to the level in the epithelial cells incubated  
 CC without the compound indicates an epithelial cell tissue source in which  
 CC the expression of the cellular gene is modulated. The polypeptide, when  
 CC dimerised, has the property of inducing a developmental cascade of tissue  
 CC specific morphogenesis. The polypeptide sequence can be selected from hOP  
 CC -1, mouse osteogenic protein (mOP)-1, hOP-2, mOP-2, Drosophila  
 CC decapentaplegic gene product (DPP), Xenopus Vgl, murine Vgr-1, human BMP  
 CC -2a or BMP-2b, human BMP, BMPs or BMP6, human GDF-1 or Drosophila 60A  
 CC proteins or naturally occurring variants  
 XX  
 XX Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB |||||  
 386 INFETVPCCAPTOLNLAIS 405  
 RESULT 129  
 AAW44302  
 ID AAW44302 standard; protein; 431 AA.  
 AC AAW44302;  
 DT 27-MAY-1998 (first entry)  
 DE Human osteogenic protein OP1.  
 XX  
 XX Human; osteogenic protein; OP1; subunit; endochondral bone formation;  
 XX dimeric; recombinant protein.  
 XX  
 XX Homo sapiens.  
 XX  
 XX US5714589-A.  
 XX  
 XX 03-FEB-1998.  
 XX  
 XX 23-MAY-1995; 95US-00447570.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 XX 15-AUG-1988; 88US-00232630.  
 XX 23-FEB-1989; 88US-00315342.  
 XX 17-OCT-1989; 88US-00422613.  
 XX 17-OCT-1989; 88US-00422659.  
 XX 22-FEB-1990; 90US-00483913.  
 XX 20-AUG-1990; 90US-00569920.  
 XX 07-SEP-1990; 90US-00579865.  
 XX 18-OCT-1990; 90US-00599543.  
 XX 18-OCT-1990; 90US-00600024.  
 XX 21-NOV-1990; 90US-00616374.  
 XX 04-DEC-1990; 90US-00621849.  
 XX 04-DEC-1990; 90US-00621988.  
 XX 22-FEB-1991; 91US-00660162.  
 XX 20-DEC-1991; 91US-00810560.  
 XX 28-JAN-1992; 92US-00827052.  
 XX 21-FEB-1992; 92US-00841646.  
 XX 01-NOV-1993; 93US-00147023.  
 XX  
 XX (STYC) STRYKER CORP.  
 XX  
 XX Pang RHL, Rueger DC, Kuberampath T, Oppermann H, Ozkaynak E;  
 PI N-PSDB; AAV15204.  
 XX  
 XX WPI; 1998-158353/14.  
 XX  
 XX Extraction of osteogenic protein from mixture - using antibodies specific  
 PT for novel polypeptide chains useful as subunit(s) of dimeric osteogenic  
 PT protein(s).  
 XX  
 XX Disclosure; Col 65-68; 127pp; English.  
 XX  
 XX The present sequence represents human osteogenic protein OP1, which is  
 CC used in the present invention. The present invention describes methods  
 CC for selectively extracting an osteogenic protein (OP) from a mixture. The  
 CC method comprises: (a) exposing the mixture to an antibody that  
 CC specifically binds OP, separating the resulting antibody-protein complex  
 CC from the mixture, and dissociating the complex. In the methods OP  
 CC comprises a pair of oxidized subunits that are disulphide-bonded to form  
 CC a dimer, and one of the subunits has an amino acid (aa) sequence  
 CC sufficiently homologous to residues 335-431 of a 431 aa protein  
 CC designated OPs, sequence given in the specification. In dimeric form OP  
 CC is capable of inducing cartilage and endochondral bone formation in a  
 CC mammal when disposed within a matrix implanted in the mammal. The methods  
 CC are used for recovering the recombinant proteins from cell cultures  
 XX  
 XX Sequence 431 AA;  
 SQ

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOINAI 20  
 DB 386 INPETHKPCAPTOINAI 405

RESULT 130  
 AAW71356  
 ID AAW71356 standard; protein; 431 AA.

XX AAW71356;

XX 14-DEC-1998 (first entry)

XX Human osteogenic protein 1.

XX Human; osteogenic protein; bone; cartilage; osteochondral defect;

XX endochondrial bone; articular cartilage; prosthesis repair;

XX spinal fusion; scoliosis; allograft repair.

XX Homo sapiens.

XX WO9841246-A2.

XX 24-SEP-1998.

XX 20-MAR-1998; 98WO-US006043.

XX 20-MAR-1997; 97US-00822186.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Rueger DC, Tucker MM, Chang A;

XX WPI; 1998-520968/44.

XX N-PSDB; AAV60227.

XX Claim 5; Page 132-134; 146pp; English.

XX The osteogenic protein is used, along with a matrix derived from a non-

XX synthetic, non-polymeric material and a binding agent, to create a device

XX for inducing local formation of bone or cartilage. The devices are used

XX for local repair of bone, cartilage and osteochondral defects (e.g. (non-

XX defects, or non-union fractures) and induces formation of endochondral

XX bone or articular cartilage. Particular applications are in repair of

XX degenerative/deteriorative conditions (e.g. osteochondritis desicans);

XX in conditions requiring much reconstructive surgery; prosthesis repair;

XX spinal fusions; scoliosis; carnial/facial repair and massive allograft

XX Sequence 431 AA;

QY 1 INPETHKPCAPTOINAI 20  
 DB 386 INPETHKPCAPTOINAI 405

RESULT 131

AAW80749  
 ID AAW80749 standard; protein; 431 AA.

AC AAW80749;  
 XX 11-JAN-1999 (first entry)

XX Human osteogenic protein.

XX Osteogenic protein; OP1; human; bone morphogenetic protein; morphogen;

XX osteogenic device.

XX Homo sapiens.

XX Key Location/Qualifiers  
 FT 330.431  
 FT Domain /note="7-cysteine domain"

XX WO9834655-A1.

XX 13-AUG-1998.

XX 05-FEB-1998; 98WO-US002159.

XX 07-FEB-1997; 97US-0037327P.

XX 29-MAY-1997; 97US-0047909P.

XX (CREA-) CREATIVE BIOMOLECULES INC.

XX Rueger DC, Tucker MM;

XX WPI; 1998-542236/46.

XX N-PSDB; AAV65199.

XX Inducing or accelerating bone formation in defects - using an osteogenic

XX protein alone or dispersed in a non-rigid, amorphous carrier.

XX Disclosure; Page 63-64; 79pp; English.

XX This is the amino acid sequence of human osteogenic protein (OP1). A

XX claimed method of inducing bone formation sufficient to fill a defect

XX locus defining a void comprises protein dispersed in a biocompatible, non

XX device comprising an osteogenic protein dispersed in a biocompatible, non

XX -rigid, amorphous carrier having no defined surfaces. Suitable osteogenic

XX proteins include OP1, OP2, bone morphogenetic proteins 2, 3, 4, 5, 6, 9,

XX 10, 11, 12, 15, and 3b, DPP, Vg1, 60A, and GDF 1, 3, 5, 6, 7, 8, 9,

XX 10 or 11. A claimed method for enhancing the quantity or quality of

XX callus formation at an osteogenic defect locus in a mammal involves

XX administering a device that comprises osteogenic protein dispersed in a

XX biocompatible, non-rigid amorphous carrier having no defined surfaces.

XX The osteogenic protein is selected from OP1 or OP2 (see AAW80750 for

XX generic sequences), or proteins defined by the generic sequences given in

XX AAW80751-53. The devices may be used for repairing bone, cartilage and/or

XX osteochondral defects. They are able to fill critical size defects and/or

XX are able to accelerate the rate, and enhance the quality of bone

XX formation in non-critical size defects. The device is typically an

XX Sequence 431 AA;

QY 1 INPETHKPCAPTOINAI 20  
 DB 386 INPETHKPCAPTOINAI 405

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOINAI 20  
 DB 386 INPETHKPCAPTOINAI 405

RESULT 132

AAW48910  
 ID AAW48910 standard; protein; 431 AA.

XX AAW48910;

XX 28-SEP-1998 (first entry)

```

XX DE Human osteogenic protein 1 (OP-1).
XX KM OP-1; osteogenic protein 1; human; morphogen; sense perception; cataract;
XX KM scotomata; glaucoma; photophobia; night blindness; retinal detachment;
XX KM Sjogren's syndrome.
XX OS Homo sapiens.
XX FT
XX FT Key Location/Qualifiers
XX FT Peptide 1..29
XX FT /label= Sig_peptide
XX FT Protein 30..292
XX FT /label= Pro_peptide
XX FT Protein 293..431
XX FT /label= Mat_protein
XX FT Domain 330..431
XX FT /label= Seven-cysteine_domain
XX FT /note= "Claim 6"
XX PN MO9820889-A1.
XX PD 22-MAY-1998.
XX PF 05-NOV-1997; 97WO-US020071.
XX PR 15-NOV-1996; 96US-00751227.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Sampath KT, Rueger DC, Cohen CM, Charette MF;
XX DR WPI; 1998-297606/26.
XX DR N-PSDB; AAV32583.
XX PS Preserving or restoring recipient function of eye, ear or nose - useful
XX PT for, e.g. treating ophthalmic disorders such as macular degeneration,
XX PT glaucoma, cataract or retinal detachment.
XX PT
XX PS Claim 6; Page 74-75; 130pp; English.
XX CC This polypeptide comprises human hippocampus osteogenic protein (OP-1). A
XX CC claimed method of preserving or restoring a placode-derived sense
XX CC perception organ of neuroectodermal origin (especially an eye, nose or
XX CC ear) in a vertebrate involves providing a morphogen to the organ or
XX CC alternatively providing morphogen-stimulated progenitor cells (PC) to
XX CC produce replacement tissue. A preferred morphogen is the claimed seven-
XX CC cysteine domain of human OP-1. The method is used to treat disorders of
XX CC eye, ear or nose, especially ophthalmic tissue which has been damaged,
XX CC surgically, accidentally, as a result of exposure to cold, light,
XX CC chemicals etc., by pathogens or by degenerative disorders (specifically
XX CC cataracts, scotomata, glaucoma, photophobia or night blindness).
XX CC Especially, the morphogen: (a) promotes regeneration of damaged retina or
XX CC cornea; (b) prevents retina from becoming anergic; (c) causes regression
XX CC of neovascularisation by inhibiting angiogenesis; (d) induces neurite
XX CC extension in retinal cells; (e) normalises intraocular pressure and light
XX CC transmittability in transparent eye tissue; (f) maintains accommodation
XX CC (prevents loss of lens elasticity); (g) accelerates integration of
XX CC prostheses, and (h) maintains lacrimal gland function (specifically for
XX CC treating Sjogren's syndrome) (all claimed)
XX SQ Sequence 431 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 1 INPETHKPCCAPTQNLNIAIS 20
XX Db 386 INPETHKPCCAPTQNLNIAIS 405
XX
XX RESULT 133

```

```

AAW59764
XX ID AAW59764 standard; protein; 431 AA.
XX AC AAW59764;
XX XX
XX DT 26-OCT-1998 (first entry)
XX XX
XX DE Morphogenically active osteogenic protein-1.
XX KM Morphogen; osteogenic protein-1; OP-1; sensory perception deficit;
XX KM hearing loss; sensory hair cell; aminoglycoside antibiotic; cisplatin;
XX KM human; ophthalmic neovascularisation; macular degeneration; torn retina;
XX KM ophthalmic inflammation; agonist.
XX OS Homo sapiens.
XX FT
XX FT MO9820890-A1.
XX PD 22-MAY-1998.
XX PF 14-NOV-1997; 97WO-US020743.
XX PR 15-NOV-1996; 96US-00751227.
XX PA (CREA-) CREATIVE BIOMOLECULES INC.
XX PI Sampath K, Rueger DC, Cohen CM, Charette MF, Jin DF;
XX DR WPI; 1998-297607/26.
XX DR N-PSDB; AAV41572.
XX PS Treating symptoms of sensory perception deficit using morphogen(s) -
XX PT useful for, e.g. maintaining, restoring or preserving sensory hair cells
XX PT in cochlea.
XX PT
XX PS Claim 2; Page 62-63; 82pp; English.
XX CC This is the amino acid sequence of the morphogenically active osteogenic
XX CC protein-1 (OP-1), used in the method of the invention to treat symptoms
XX CC of sensory perception deficit. This maintains, and restores or preserves
XX CC sensory perception. Specifically OP-1 is used in cases of hearing loss
XX CC caused by loss of sensory hair cells, e.g. as a result of treatment with
XX CC aminoglycoside antibiotics, cisplatin or sound. More generally it can be
XX CC used in human or veterinary medicine to treat any neural tissue injury or
XX CC neuropathy. Typical of many examples are corneal wounds, ophthalmic
XX CC neovascularisation, macular degeneration, torn retina or ophthalmic
XX CC inflammation. The function of OP-1 may be replaced by an agonist
XX SQ Sequence 431 AA;
XX
XX Query Match 100.0%; Score 111; DB 2; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 1 INPETHKPCCAPTQNLNIAIS 20
XX Db 386 INPETHKPCCAPTQNLNIAIS 405
XX
XX RESULT 134
XX AAY17391
XX ID AAY17391 standard; protein; 431 AA.
XX AC AAY17391;
XX XX
XX DT 22-JUL-1999 (first entry)
XX XX
XX DE Human osteogenic protein OP-1.
XX KM Human; osteogenic protein; OP-1; OPX; morphogen; stroke;
XX KM neuronal cell loss; Alzheimer's disease; Parkinson's disease;
XX KM Huntington's disease; senile dementia; alcohol-induced dementia.
XX XX

```



OS Homo sapiens.  
 XX WO9921574-A2.  
 PN  
 XX  
 PD 06-MAY-1999.  
 XX  
 PF 26-OCT-1998; 98WO-US022655.  
 XX  
 PR 27-OCT-1997; 97US-0063624P.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 PI Charette MF, Rueger DC, Higgins D;  
 XX  
 DR WPI; 1999-326638/27.  
 DR N-PSDB; AAX56414.  
 XX  
 PT Potentiating morphogen activity useful for treating Alzheimer's disease.  
 PT Parkinson's disease and Huntington's disease.  
 XX  
 PS Claim 16; Page 58-59; 62pp; English.  
 XX  
 CC A method has been developed for potentiating morphogen activity. The  
 CC method comprising administering to a mammal a composition comprising a  
 CC molecule capable of releasing morphogen inhibition. The method is useful  
 CC for promoting neuronal cell growth by potentiating growth-promoting  
 CC effects of endogenous morphogens and is therefore useful for treating  
 CC disorders characterized by neuronal cell loss, including Alzheimer's  
 CC disease, Parkinson's disease, Huntington's disease, senile dementia,  
 CC alcohol-induced dementia and stroke. The present sequence represents  
 CC human osteogenic protein Op-1 which can be used as a morphogen in the  
 CC method of the invention  
 XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNAIS 20  
 ||||||||||||||||  
 DB 386 INPETHKPCCAPTQNAIS 405

## RESULT 135

AAW86382  
 ID AAW86382 standard; protein; 431 AA.

AC AAW86382;  
 XX

DT 30-MAR-1999 (first entry)  
 XX

DE Human osteogenic protein 1.  
 XX

KW Osteogenic protein; OP-1; tissue morphogenesis; morphogenic protein;  
 KW bone fracture; osteochondrial defect; myocardium; infarction;  
 KW axonal nerve regeneration; liver cirrhosis; ulcerative bowel disease;  
 KW emphysema; inflammatory disease; lung.  
 XX

OS Homo sapiens.  
 XX

PN WO9854572-A1.  
 XX

PD 03-DEC-1998.  
 XX

PF 29-MAY-1998; 98WO-US010909.  
 XX

PR 30-MAY-1997; 97US-0048062P.  
 XX

PR 30-MAY-1997; 97US-0048063P.  
 XX

PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX

PI Sampath KT, Cohen CM;  
 XX  
 DR WPI; 1999-080815/07.  
 DR N-PSDB; AAY80735.  
 XX

PT Evaluating systemic activity of morphogenic proteins at localized defect  
 PT sites - useful for determining pharmacokinetics and efficacy of  
 PT morphogenic and osteogenic proteins for systemic treatment of tissue  
 PT defects.  
 XX

PS Disclosure; Page 60-61; 93pp; English.  
 XX

CC A method has been developed for evaluating the morphogenic activity of a  
 CC candidate morphogenic protein (MP) or its analogues. The method  
 CC comprises: (1) creating a local permissive defect site in a mammal; (2)  
 CC administering a candidate MP systemically to the mammal; and (3)  
 CC measuring the ability of the candidate protein to induce new tissue  
 CC formation at the defect site. The test method is used to assess efficacy  
 CC and pharmacokinetic properties of the MP, e.g. to evaluate dosage, to  
 CC determine preferred administration times and routes for particular  
 CC individuals, including effect of supplementary agents. Osteogenic  
 CC proteins (OP) are particularly used to repair bone fractures,  
 CC osteochondrial defects and defects too large to heal naturally. MP are  
 CC used to treat defects in a very wide range of tissue, e.g. the myocardium  
 CC in cases of infarction; to stimulate axonal nerve regeneration; for  
 CC treating liver cirrhosis, ulcerative bowel disease, emphysema or other  
 CC inflammatory diseases of the lung. The in vivo activity of MP can be  
 CC assessed quickly. When MP and OP are administered systemically, only a  
 CC single injection may be sufficient, when given a significant time after  
 CC injury, even after the development of fibrosis has started. This method  
 CC of administration allows non-surgical repair of defects and increases the  
 CC rate and quality of replacement tissue formation, even in compromised  
 CC patients. The present sequence represents human Op-1 from the present  
 CC invention  
 XX

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNAIS 20  
 ||||||||||||||||  
 DB 386 INPETHKPCCAPTQNAIS 405

## RESULT 136

AAZ8656  
 ID AAZ8656 standard; protein; 431 AA.

AC AAZ8656;  
 XX

DT 19-OCT-1999 (first entry)  
 XX

DE Human osteogenic protein 1.  
 XX

KW Human osteogenic protein 1; hOP 1; morphogenic protein; TGF-Beta;  
 KW cognitive function; progenitor cell; functional replacement tissue;  
 KW precursor; cysteine conserved pattern; carboxy terminal active domain;  
 KW memory dysfunction; neuroprotective effect; brain tissue damage; trauma;  
 KW oxygen deprivation; glucose deprivation; neurocortex; dementia; senility;  
 KW neurodegenerative disorder; cardiac arrest; glucose metabolism disorder;  
 KW Alzheimer's disease; pro-domain; anorexia; Parkinson's disease.  
 XX

OS Homo sapiens.  
 XX

PH Key location/Qualifiers  
 XX

FT Domain 330..431  
 FT /label= Carboxy-terminal\_active\_domain  
 FT /note= "Conserved pattern of cysteine residues"

PN WO9937320-A1.  
 XX

PD 29-JUL-1999.  
 XX 21-JAN-1999; 99MO-US001232.  
 XX 23-JAN-1998; 98US-00012846.  
 XX (CREA-) CREATIVE BIOMOLECULES INC.  
 XX Charette MF;  
 XX WPI; 1999-478984/40.  
 DR N-Psdb; AAX80559.  
 XX  
 PT Protection of cognitive function using morphogenic proteins.  
 PS Claim 15a; Page 63-64; 74pp; English.  
 XX  
 CC The present sequence is the human osteogenic protein 1 (hop 1) which is a  
 CC morphogenic protein and is a representative of the TGF-Beta subclass of  
 CC true tissue morphogens. The morphogenic proteins are capable of inducing  
 CC the proliferation and differentiation of progenitor cells into functional  
 CC replacement tissue and can be used for restoring, improving and from a  
 CC precursor having an N-terminal signal peptide followed by a pro-domain.  
 CC The pro-domain is cleaved to yield the mature C-terminal active domain  
 CC which includes a conserved pattern of cysteines. The protein can be used  
 CC to reduce memory dysfunction and provides a neuro-protective effect in  
 CC mammals with brain tissue damage resulting from mechanical or chemical  
 CC trauma, oxygen or glucose deprivation, neuro-toxin, a neurodegenerative  
 CC disorder or dementia. The subject may be afflicted with cardiac arrest,  
 CC Alzheimer's disease, senility, glucose metabolism disorder, anorexia and  
 CC Parkinson's disease  
 XX  
 SQ Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNHS 20  
 386 INPETHKPCCAPTQNLNHS 405  
 Db  
 RESULT 137  
 AAM89679  
 ID AAM89679 standard; protein; 431 AA.  
 XX  
 AC AAM89679;  
 XX  
 DT 20-MAR-2003 (revised)  
 DT 24-MAR-1999 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 KW Human; osteogenic protein; OP-1; OPX; endochondral bone formation;  
 KW cartilage; craniofacial defect; skeletal disorder; dental disorder;  
 KW non-union fracture; osteoarthritis; vasculatization; mineralisation;  
 KW bone marrow differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US863758-A.  
 XX  
 PD 26-JAN-1999.  
 XX  
 PF 23-MAY-1995; 95US-00449700.  
 XX  
 PR 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232530.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.

PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC) STRYKER CORP.  
 XX  
 PI Pang RHL, Rueger DC, Kuberasampath T, Oppermann H, Ozkayrak E;  
 XX  
 DR WPI; 1999-131303/11.  
 DR N-Psdb; AAX00229.  
 XX  
 PT Nucleic acid encoding mammalian osteogenic proteins in prepro form - able  
 PT to induce cartilage and bone formation when implanted in matrix, useful  
 PT for repairing bone defects.  
 PS Claim 1; Col 63-66; 127pp; English.  
 XX  
 CC The present invention describes isolated DNA (I) encoding at least one  
 CC osteogenically active region of human osteogenic protein-1 in prepro form  
 CC (OP-PP), murine OP1-PP, murine OP2-PP or human OP2-PP. Also described  
 CC are: (A) DNA related to (I) encoding a polypeptide able to form dimers  
 CC that can induce cartilage and endochondral bone formation in a mammal;  
 CC when implanted in a matrix; (B) vectors containing (I) or related DNA;  
 CC (C) host cells transformed with this vector; (D) DNA (I') encoding a  
 CC prepro- or pro-OP1, and related vectors and transformed cells; (E)  
 CC osteogenic protein (II) produced by expression of transformed mammalian  
 CC cells, able to induce bone and cartilage formation; (F) mature OP1  
 CC secreted from mammalian cells following expression of the sequence that  
 CC encodes hop1-PP; and (G) production of an active osteogenic composition  
 CC by truncating mature OP1 protein. Host cells of (C) are used to produce  
 CC proteins able to induce cartilage and bone formation, e.g. for correction  
 CC of acquired or congenital craniofacial defects or other skeletal or  
 CC dental disorders; to heal non-union fractures; to repair cartilage, e.g.  
 CC in osteoarthritis, or generally wherever bone formation is required. The  
 CC proteins induce complete development of endochondral bone, including  
 CC vasculatization, mineralisation and bone marrow differentiation. The  
 CC present sequence represents human OP1. (Updated on 20-MAR-2003 to correct  
 CC PA field.)  
 XX  
 SQ Sequence 431 AA;  
 Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHKPCCAPTQNLNHS 20  
 386 INPETHKPCCAPTQNLNHS 405  
 Db  
 RESULT 138  
 AAM95448  
 ID AAM95448 standard; protein; 431 AA.  
 XX  
 AC AAM95448;  
 XX  
 DT 26-MAR-1999 (first entry)  
 XX  
 DE Human osteogenic protein 1 (OP1).  
 XX  
 KW Cystic kidney disease; renal; therapeutic; osteogenic protein; OP;  
 KW bone morphogenic protein; BMP; growth factor-beta superfamily;  
 KW polycystic kidney disease; multicystic dysplastic kidney disease;

KM uraemic medullary cystic disease; human; OPI.  
XX  
XX Homo sapiens.  
XX  
PN WO9850061-A1.  
XX  
XX 12-NOV-1998.  
PD  
XX  
PF 06-MAY-1998; 98WO-US009268.  
XX  
XX 07-MAY-1997; 97US-0045909P.  
PR  
XX (BIOJ ) BIOGEN INC.  
PA  
XX Gjoerstrup P, Harris R;  
PI  
XX WPI; 1999-070084/06.  
DR  
XX  
XX Treating cystic kidney disease - using renal therapeutic agents or  
PT sequences encoding them, especially from the osteogenic protein/bone  
PT morphogenic protein family.  
XX  
XX Claim 4; Page: 67pp; English.  
PS  
XX The invention relates to methods for treating cystic kidney diseases. The  
CC method comprises administering an effective amount of a renal therapeutic  
CC agent or a polynucleotide encoding the therapeutic agent. The therapeutic  
CC agent is preferably a soluble or membrane bound polypeptide, e.g. a  
CC member of the osteogenic protein/bone morphogenic protein (Op/BMP) family  
CC within a transforming growth factor-beta superfamily of proteins. It is  
CC especially one of the polypeptides hOP1, hOP1-PP, OP1-18Ser, OP1, OP7,  
CC OP1-18Ser, OP1-16Ileu, OP1-16Met, OP1-16Ala, OP1-16Val, MOP1, MOP1-PP,  
CC hOP2, hOP2-PP, hOP2-Ala, hOP2-Pro, hOP2-Arg, or hOP2-Ser or their  
CC biologically active homologues. The method is used to treat humans  
CC having, or at risk of, cystic kidney disease, e.g. autosomal recessive  
CC (infantile) polycystic disease, multicystic dysplastic kidney disease,  
CC uraemic medullary cystic disease, and autosomal dominant polycystic  
CC kidney disease. The present sequence represents a prepro form of the  
CC human osteogenic protein 1 (OP1) that can be used as a therapeutic agent  
CC in the method of the invention. Note: This sequence is not provided in  
CC the specification. It has been obtained from U.S. Patent No. 5,266,663  
XX  
SQ Sequence 431 AA;  
XX  
Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
XX  
RESULT 139  
AAAY24093  
ID AAAY24093 standard; protein; 431 AA.  
XX  
AC AAAY24093;  
XX  
XX 08-SEP-1999 (first entry)  
DT  
XX  
DE Human osteogenic protein OP-1.  
XX  
XX Mouse; type 10 collagen promoter; Apl sequence A; osteogenic protein;  
KM OP-1; morphogen; bone morphogenic protein; BMP; soft tissue disorder;  
KM apoptosis; morphogen-activated regulatory pathway; tumour;  
KM cellular immune rejection; viral disease.  
XX  
OS Homo sapiens.  
XX  
XX WO9931136-A2.  
PN  
XX 24-JUN-1999.  
PD

XX  
XX 16-DEC-1998; 98WO-US026788.  
PF  
XX  
XX 17-DEC-1997; 97US-0069931P.  
PR  
XX 01-DEC-1998; 98US-0110498P.  
XX  
XX (CREA-) CREATIVE BIOMOLECULES INC.  
PA  
XX  
XX Sampath KT, Cohen CW, Oeda E, Miyazono K, Kawabata M;  
PI  
XX WPI; 1999-418756/35.  
DR  
XX N-PSDB; AAX83980.  
DR  
XX  
PT Maintaining or restoring tissue-appropriate phenotype.  
XX  
XX Disclosure; Page 47-50; 50pp; English.  
PS  
XX  
XX A method has been developed for maintaining or restoring tissue-  
CC appropriate phenotype by expression of a phenotype-specific protein or by  
CC inhibiting an intracellular pathway that induces expression of a gene  
CC that is an inhibitor of normal phenotype. The method is for restoring  
CC cellular phenotype in a cell effected by disease, damage or age. The  
CC method comprises activating an intracellular pathway that induces  
CC expression of a phenotype-specific gene. Another method is also described  
CC for restoring cellular phenotype in a cell effected by disease, damage or  
CC age, comprising inhibiting an intracellular pathway that induces  
CC expression of a gene (especially TGF-beta) that is an inhibitor of normal  
CC phenotype. The methods can be used to treat soft tissue disorders by  
CC affecting apoptosis by modulating a morphogen-activated, regulatory  
CC pathway e.g. in tumours, cellular immune rejection and viral diseases.  
CC The present sequence is used in the exemplification of the present  
XX invention  
XX  
SQ Sequence 431 AA;  
XX  
Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
XX  
RESULT 140  
AAAY2797  
ID AAAY2797 standard; protein; 431 AA.  
XX  
XX AAAY2797;  
AC  
XX  
XX 19-JAN-2000 (first entry)  
DT  
XX  
DE Human osteogenic protein OP-1.  
XX  
XX Osteogenic protein; OP-1; bone morphogenetic protein 7; BMP-7;  
KM differentiation; proliferation; morphogenesis; morphogen; dimer;  
KM heterodimer; homodimer; cysteine; mesenchymal cell; stem cell;  
KM pluripotent; multipotent; progenitor; modulation; bone; osteogenesis;  
KM adipogenesis; tissue; repair; regeneration; maintenance.  
XX  
OS Homo sapiens.  
XX  
XX  
XX Key Location/Qualifiers  
FH Domain 330..431  
FT /note="Active seven-cysteine C-terminal domain"  
XX  
XX WO9947156-A2.  
PN  
XX  
XX 23-SEP-1999.  
PD  
XX  
XX 12-MAR-1999; 99WO-US005533.  
PF  
XX  
XX 14-MAR-1998; 98US-0078027P.  
PR

XX (CREA-) CREATIVE BIOMOLECULES INC.  
 XX Rieger DC;  
 PI MPI, 1999-601070/51.  
 DR N-PSDB; AAZ30824.  
 XX  
 PT New composition useful for modulating cell differentiation.  
 PS Claim 1; Page 37-38; 43pp; English.

XX This sequence represents human osteogenic protein OP-1 (also known as  
 CC bone morphogenetic protein-7 or BMP-7). OP-1 is a member of the morphogen  
 CC family of proteins which is a subgroup of the TGF-beta superfamily of  
 CC growth factors. Morphogens are known to induce the proliferation and  
 CC differentiation of progenitor cells in numerous soft and hard tissues,  
 CC with the bone morphogenetic family having the ability to induce ectopic,  
 CC endochondral bone morphogenesis. The mature morphogen protein results  
 CC from post-translational processing and is capable of dimerisation and  
 CC contains a C-terminal domain which is responsible for morphogenetic  
 CC activity. This C-terminal domain contains a pattern of 7 cysteine  
 CC residues that is conserved throughout the morphogen family. The active  
 CC morphogen may be a homodimer comprising two subunits from the same  
 CC morphogen family member, or it may be a heterodimer of two different  
 CC members. A novel composition for the modulation of cell differentiation  
 CC comprises a lipid and a morphogen, where the morphogen consists of two  
 CC proteins having 60 and 70% homology, respectively, to the C-terminal,  
 CC seven-cysteine domain of human OP-1. The composition may be used for  
 CC modulating cell differentiation, where the cells to be treated are  
 CC selected from multipotent mesenchymal cells, pluripotent stem cells,  
 CC differentiated cells, and progenitor cells. The composition may also be  
 CC used to produce progenitor cells, where undifferentiated cells are  
 CC induced to differentiate into progenitor cells. The progenitor cells  
 CC produced may be muscle progenitor cells, adipocytes and osteoprogenitor  
 CC cells. The composition facilitates the control of cells to promote  
 CC repair, regeneration and maintenance of tissue

XX Sequence 431 AA;  
 SQ

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 141  
 ID AAY43108 standard; protein; 431 AA.  
 XX  
 AC AAY43108;  
 XX  
 DT 16-DEC-1999 (first entry)  
 XX  
 DE Human osteogenic protein 1 sequence.  
 XX  
 KW Chondrogenic protein; biodegradable matrix; cell proliferation;  
 KW cell differentiation; migratory progenitor cell; cartilage formation;  
 KW allogenic implant; xenogenic implant; endochondral bone formation;  
 KW osteogenic protein.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US95958441-A.  
 XX  
 PD 28-SEP-1999.  
 XX  
 PF 24-MAY-1995; 95US-00449699.  
 XX  
 PR 08-APR-1998; 88US-00179406.

PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 22-FEB-1991; 91US-00621988.  
 PR 20-DEC-1991; 91US-00660162.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 PR 22-DEC-1992; 92US-00959545.  
 PR 01-NOV-1993; 93US-00147023.  
 XX  
 PA (STYC) STRYKER BIOTECH CORP.  
 XX  
 PI Rieger DC, Pang RH, Kuberanampath T, Ozkaynak E, Oppermann H;  
 DR MPI, 1999-589530/50.  
 DR N-PSDB; AAZ27574, AAZ27575.  
 XX  
 PT Implant for mammals permitting the influx, proliferation and  
 PT differentiation of migratory progenitor cells, useful for inducing  
 PT endochondral bone formation in mammals.  
 XX  
 PS Disclosure; Col 61-64; 127pp; English.

XX This sequence represents the human osteogenic protein 1 (OP1). The  
 CC invention relates to a device for implantation in a mammal comprising a  
 CC chondrogenic protein (1) dispersed within a biocompatible, in vivo  
 CC degradable matrix defining pores which permits the influx, proliferation  
 CC and differentiation of migratory progenitor cells, where (1) comprises a  
 CC substantially pure protein with the amino acid sequence VPRPCAP1, which  
 CC is capable of inducing cartilage formation. The device is used as an  
 CC allogenic or xenogenic implant for the induction endochondral bone  
 CC formation in mammals

XX Sequence 431 AA;  
 SQ

Query Match 100.0%; Score 111; DB 2; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
 Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 142  
 ID AAM86339 standard; protein; 431 AA.  
 XX  
 AC AAM86339;  
 XX  
 DT 15-MAR-1999 (first entry)  
 XX  
 DE Human osteogenic protein OP-1.  
 XX  
 KW Human; osteogenic protein; OP-1; osteogenesis; morphogen; bone repair;  
 KW cartilage; OPX; calcium phosphate matrix; metal implant;  
 KW cosmetic surgery.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO9851354-A2.  
 XX  
 PD 19-NOV-1998.

```

PF 15-MAY-1998; 98WO-US009951.
XX
XX 15-MAY-1997; 97US-0046589P.
PR 14-MAR-1998; 98US-00039107.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
PA
PI Rueger DC, Tucker MM;
XX
XX WPI; 1999-059691/05.
DR N-PSDB; AAV80656.
XX
PT Inducing growth of new bone at a defect using osteogenic protein -
PT incorporated in calcium phosphate matrix or coated on metal implant.
XX
XX Claim 3; Page 29-30; 58pp; English.
XX
CC A method has been developed for promoting new bone growth at a bone
CC defect site in a mammal. The method involves; (1) implanting a calcium
CC phosphate matrix, comprising at least one osteogenic protein, at the
CC defect site; or (2) implanting at least one osteogenic protein as a
CC coating on a metal implant. The present sequence represents human
CC osteogenic protein OP-1. The method is used to repair all types of bone
CC and/or cartilage defects, particularly in bones of the face (mandible or
CC maxilla) or in cosmetic surgery. The metal implants are used to repair
CC gap fractures. Use of a calcium phosphate matrix greatly improves the
CC structure of the new bone growth, especially in short, irregular or flat
CC bones (e.g. in head, face, hands and feet). The devices increase both
CC rate and quality of new bone, particularly in compromised subjects such
CC as diabetics
CC
XX
SQ Sequence 431 AA;
XX
Query Match 100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHPCPCAPTOINAI 20
Db 386 INPETHPCPCAPTOINAI 405
XX
RESULT 143
AAV18144
ID AAV18144 standard; protein; 431 AA.
XX
AC AAV18144;
XX
XX 12-AUG-1999 (first entry)
DT
DE Human OP-1 protein sequence.
XX
XX OP-1; human; vector; morphogen expression; vascular disease; restenosis;
XX vascular smooth muscle cell; proliferation inhibitor; atherosclerosis;
XX vascular proliferative disease; angioplasty; therapy; collagen;
XX extracellular matrix protein.
XX
XX Homo sapiens.
XX
XX WO9928341-A2.
XX
XX 10-JUN-1999.
PD
XX 30-NOV-1998; 98WO-US025398.
XX
XX 04-DEC-1997; 97US-0067690P.
XX
XX (CREA-) CREATIVE BIOMOLECULES INC.
XX
XX Nakaoka T, Miyazono K, Sampath KT;
XX
XX WPI; 1999-358109/30.
XX
XX N-PSDB; AAX79684.
XX

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XX
XX Vectors expressing morphogens and related compositions.
PT
XX
XX Claim 1; Page 39-41; 41pp; English.
PS
XX
XX This sequence represents the human OP-1 protein. The invention relates to
XX a vector for the expression of a morphogen in a mammalian cell. The
XX vector comprises DNA encoding a morphogen comprising an amino acid
XX sequence with at least 70% homology with the C-terminal 102-106 amino
XX acids, including the conserved seven cysteine domain of OP-1. Vascular
XX disease are characterized by an excessive build-up of vascular smooth
XX muscle cells, resulting in an occlusion of a blood vessel, and/or by loss
XX of elasticity in the blood vessels. The vector or a composition
XX comprising the morphogen are used to inhibit proliferation of smooth
XX muscle cells, to preserve the integrity of vascular tissue, protect
XX smooth muscle from cytotoxicity, reduce inflammation of vascular
XX epithelium, maintain the normal balance of type I and III collagen in
XX smooth muscle tissue, treat a vascular proliferative disease, especially
XX atherosclerosis or restenosis and to inhibit restenosis after
XX angioplasty. All these treatments operate to preserve the cell phenotype
XX by inhibiting an increase in extracellular matrix proteins, such as
XX collagen, or by maintaining the normal balance of extracellular matrix
XX proteins, such as types I and III collagen
XX
XX
SQ Sequence 431 AA;
XX
Query Match 100.0%; Score 111; DB 2; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 INPETHPCPCAPTOINAI 20
Db 386 INPETHPCPCAPTOINAI 405
XX
RESULT 144
AAV92587
ID AAV92587 standard; protein; 431 AA.
XX
AC AAV92587;
XX
XX 10-AUG-2000 (first entry)
DT
DE Morphogenic protein OP-1.
XX
XX 60-A; finger 2 subdomain; BMP; TGF-beta family; protein refolding;
XX fusion protein; osteopathic; antibacterial; cyostatic.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX CDS 49..1344 /tag= a
XX FT /product= "OP-1"
XX
XX WO200020449-A2.
XX
XX 13-APR-2000.
XX
XX 07-OCT-1999; 99WO-US033372.
XX
XX 07-OCT-1998; 98US-0103418P.
XX
XX 16-AUG-1999; 99US-00375333.
XX
XX (STYC ) STRYKER CORP.
XX
XX Oppermann H, Tai M, Mccartney J;
XX
XX WPI; 2000-303743/26.
XX
XX N-PSDB; AAA09390.
XX
XX A biologically active TGF-beta family member fusion protein competent to
XX refold, comprising a C-terminal linked TGF-beta family protein.
XX

```

XX Example 1; Page 136-139; 160pp; English.

XX CC Knowing the sequence of OP-1 and its C-terminal seven cysteine domain is useful for the construction of BMP mutants. Novel proteins comprise biologically active TGF-beta family member fusion proteins competent to refold under suitable refolding conditions. The fusion proteins comprise: (1) a TGF-beta family protein C-terminal seven cysteine domain, comprising finger 1, finger 2 and heel subdomains; and (2) a heterologous leader sequence domain operatively linked to the C-terminal domain. CC Truncations, heterodimers and mutants of these fusion proteins and CC methods of purifying the heterodimers are also claimed. The TGF-beta family proteins can be used to induce the full cascade of morphogenic events which culminate in skeletal tissue formation, including cartilage and endochondral bone formation. They are useful in the binding of fibrin and fibronectin to the implanted matrix, chemotaxis of cells, CC proliferation of fibroblasts, differentiation into chondroblasts, CC cartilage formation, vascular invasion, bone formation, remodeling, and CC bone marrow differentiation. The proteins have improved physical CC properties such as solubility and stability, improved biological CC activity, including altered receptor binding and improved targeting CC capabilities

XX CC Sequence 431 AA;

SO Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 145  
AAB09598  
ID AAB09598 standard; protein; 431 AA.  
XX  
AC AAB09598;  
DT 11-SEP-2000 (first entry)  
DE Human OP-1 mutant protein R426D.  
XX  
KM Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery; mutant; muten.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN WO200020607-A2.  
PD 13-APR-2000.  
XX  
PF 07-OCT-1999; 99WO-US023371.  
XX  
PR 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
XX  
PA (STYC ) STRYKER CORP.  
PI Oppermann H, Tai M, McCartney J;  
XX  
DR WPI; 2000-303787/26.  
XX  
PT Transforming growth factor-beta superfamily member mutant induces tissue morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental tissue and connective tissue and comprises a substitution in a region of the finger 2 domain.  
XX

PS Claim 22; Page; 162pp; English.

XX CC The invention relates to mutant TGF-beta (transforming growth factor-beta) superfamily members. These mutants comprise one or more amino acid substitutions in the base region of the finger 2 subdomain, and a C-terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g., Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-beta superfamily proteins regulate developmental processes and include CC proteins such as the osteogenic proteins (OPs), bone morphogenetic CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors. CC Specific examples of TGF-beta superfamily mutants encompassed by the CC invention are the finger 2 subdomain mutants of human osteogenic protein-1 (OP-1) (AAB09576-509615). Mutant TGF-beta proteins are used for CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue, CC dental tissue, connective tissue, brain, liver and nerve tissue. The CC proteins can be used in conjunction with a biocompatible matrix e.g., CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone, CC cartilage and/or other mineralized skeletal or connective tissues e.g., CC ligament, tendon, muscle, fibrocartilage, joint capsule and CC damaged mammalian tissue and to prevent or substantially inhibit CC immune/inflammatory response-mediated tissue damage and scar tissue CC formation following an injury. Compared to the wild-type TGF-beta CC superfamily members, the mutant proteins have improved in vitro refolding CC properties in a pH range of 6-9, increased solubility in aqueous solution CC and improved stability and/or activity. Sequences AAB09547-B09548 and CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic CC protein-1 (OP-1). Note: The present sequence is not shown in the CC specification, but is derived from the wild-type human OP-1 sequence CC given on page 138-139

XX CC Sequence 431 AA;

SO Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 146  
AAB09518  
ID AAB09518 standard; protein; 431 AA.  
XX  
AC AAB09518;  
DT 11-SEP-2000 (first entry)  
DE Human morphogenic protein OP-1, SEQ ID NO:39.  
XX  
KM Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KW transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery.  
XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN WO200020607-A2.  
PD 13-APR-2000.  
XX  
PF 07-OCT-1999; 99WO-US023371.  
XX  
PR 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
XX  
PA (STYC ) STRYKER CORP.

Tue Oct 26 09:17:05 2004

us-10-619-910-11.oct24.rag

Page 75

PI Opermann H, Tai M, Mccartney J;  
XX WPI; 2000-303787/26.  
XX  
PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
PS Claim 2; Page 138-139; 162pp; English.

CC The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibins.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralised skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralised skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. The present sequence represents  
CC wild-type human osteogenic protein-1 (OP-1)  
XX

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQLNAIS 20  
Db 386 INPETHKPCAPQLNAIS 405

RESULT 147

AAB09596  
ID AAB09596 standard; protein; 431 AA.

XX AAB09596;  
XX  
DT 11-SEP-2000 (first entry)  
XX  
DE Human OP-1 mutant protein R421D.

KM Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KM transforming growth factor-beta; developmental regulation;  
KM finger 2 subdomain; basic region; protein refolding; stability;  
KM solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KM connective tissue; cartilage; vunerary; mutant; mutein.

XX Homo sapiens.  
OS Synthetic.

XX WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023371.  
XX 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
XX (STYC) STRYKER CORP.  
XX  
PI Opermann H, Tai M, Mccartney J;  
XX WPI; 2000-303787/26.  
XX

PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
PS Claim 22; Page; 162pp; English.

CC The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibins.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralised skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralised skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139  
XX

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQLNAIS 20  
Db 386 INPETHKPCAPQLNAIS 405

RESULT 148

AAB09607  
ID AAB09607 standard; protein; 431 AA.

XX AAB09607;  
XX  
DT 11-SEP-2000 (first entry)  
XX  
DE Human OP-1 mutant protein R421S.

KM Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
KM transforming growth factor-beta; developmental regulation;  
KM finger 2 subdomain; basic region; protein refolding; stability;  
KM

KM solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnery; mutant; mutein.  
XX Homo sapiens.  
OS Synthetic.  
XX  
XX WO200020607-A2.  
XX  
XX 13-APR-2000.  
XX  
XX  
XX 07-OCT-1999; 99WO-US023371.  
XX  
XX 07-OCT-1998; 98US-0103418P.  
XX 16-AUG-1999; 99US-00374958.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Oppermann H, Tai M, McCartney J;  
XX WPI; 2000-303787/26.  
XX  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
XX morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
XX tissue and connective tissue and comprises a substitution in a region of  
XX the finger 2 domain.  
XX  
XX Claim 23; Page; 162pp; English.  
XX  
XX The invention relates to mutant TGF-beta (transforming growth factor-  
XX beta) superfamily members. These mutants comprise one or more amino acid  
XX substitutions in the base region of the finger 2 subdomain, and a C-  
XX terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
XX 2 subdomain, basic residues (e.g., Arg, Lys) or residues containing an  
XX amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
XX Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
XX beta superfamily proteins regulate developmental processes and include  
XX proteins such as the osteogenic proteins (OPs), bone morphogenetic  
XX proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
XX Specific examples of TGF-beta superfamily mutants encompassed by the  
XX invention are the finger 2 subdomain mutants of human osteogenic protein-  
XX 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
XX inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
XX dental tissue, connective tissue, brain, liver and nerve tissue. The  
XX proteins can be used in conjunction with a biocompatible matrix e.g.,  
XX collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
XX cartilage and/or other mineralized skeletal or connective tissues e.g.,  
XX ligament, tendon, muscle, fibrocartilage, joint capsule and  
XX intervertebral discs. The OP-1 mutants can be used to repair diseased or  
XX damaged mammalian tissue and to prevent or substantially inhibit  
XX immune/inflammatory response-mediated tissue damage and scar tissue  
XX formation following an injury. Compared to the wild-type TGF-beta  
XX superfamily members, the mutant proteins have improved in vitro refolding  
XX properties in a pH range of 6-9, increased solubility in aqueous solution  
XX and improved stability and/or activity. Sequences AAB09547-B09548 and  
XX AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
XX protein-1 (OP-1). Note: The present sequence is not shown in the  
XX specification, but is derived from the wild-type human OP-1 sequence  
XX given on page 138-139  
XX  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1,8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTQNLNALS 20  
Db 386 INPETHKPCCAPTQNLNALS 405  
RESULT 149  
AAB09615  
ID AAB09615 standard; protein; 431 AA.

XX  
XX AAB09615;  
XX  
XX 11-SEP-2000 (first entry)  
XX  
XX Human OP-1 mutant protein R426T.  
XX  
XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnery; mutant; mutein.  
XX  
XX Homo sapiens.  
XX Synthetic.  
XX  
XX WO200020607-A2.  
XX  
XX 13-APR-2000.  
XX  
XX 07-OCT-1999; 99WO-US023371.  
XX  
XX 07-OCT-1998; 98US-0103418P.  
XX 16-AUG-1999; 99US-00374958.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Oppermann H, Tai M, McCartney J;  
XX WPI; 2000-303787/26.  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
XX morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
XX tissue and connective tissue and comprises a substitution in a region of  
XX the finger 2 domain.  
XX  
XX Claim 23; Page; 162pp; English.  
XX  
XX The invention relates to mutant TGF-beta (transforming growth factor-  
XX beta) superfamily members. These mutants comprise one or more amino acid  
XX substitutions in the base region of the finger 2 subdomain, and a C-  
XX terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
XX 2 subdomain, basic residues (e.g., Arg, Lys) or residues containing an  
XX amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
XX Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
XX beta superfamily proteins regulate developmental processes and include  
XX proteins such as the osteogenic proteins (OPs), bone morphogenetic  
XX proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
XX Specific examples of TGF-beta superfamily mutants encompassed by the  
XX invention are the finger 2 subdomain mutants of human osteogenic protein-  
XX 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
XX inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
XX dental tissue, connective tissue, brain, liver and nerve tissue. The  
XX proteins can be used in conjunction with a biocompatible matrix e.g.,  
XX collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
XX cartilage and/or other mineralized skeletal or connective tissues e.g.,  
XX ligament, tendon, muscle, fibrocartilage, joint capsule and  
XX intervertebral discs. The OP-1 mutants can be used to repair diseased or  
XX damaged mammalian tissue and to prevent or substantially inhibit  
XX immune/inflammatory response-mediated tissue damage and scar tissue  
XX formation following an injury. Compared to the wild-type TGF-beta  
XX superfamily members, the mutant proteins have improved in vitro refolding  
XX properties in a pH range of 6-9, increased solubility in aqueous solution  
XX and improved stability and/or activity. Sequences AAB09547-B09548 and  
XX AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
XX protein-1 (OP-1). Note: The present sequence is not shown in the  
XX specification, but is derived from the wild-type human OP-1 sequence  
XX given on page 138-139  
XX  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1,8e-06;



Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPKPCAPPTQMAIS 20  
| | | | | | | | | | | | | | | | | | | | | | | | | |  
| | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 386 INPETHPKPCAPPTQMAIS 405

## RESULT 150

AAB09576

ID AAB09576 standard; protein; 431 AA.

AAB09576;  
11-SEP-2000 (first entry)

Human OP-1 mutant protein H2177.

XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnary; mutant; mutein.

OS Homo sapiens.  
OS Synthetic.

WO200020607-A2.

13-APR-2000.

07-OCT-1999; 99WO-US023371.

07-OCT-1998; 98US-0103418P.

16-AUG-1999; 99US-00374958.

(STYC) STRYKER CORP.

Oppermann H, Tai M, McCartney J;

WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.

Disclosure; Page: 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
XX beta) superfamily members. These mutants comprise one or more amino acid  
XX substitutions in the base region of the finger 2 subdomain, and a C-  
XX terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
XX 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
XX amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
XX Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
XX beta superfamily proteins regulate developmental processes and include  
XX proteins such as the osteogenic proteins (OPs), bone morphogenetic  
XX proteins (BMPs), growth/differentiation factors (GDFs) and inhibins.  
XX Specific examples of TGF-beta superfamily mutants encompassed by the  
XX invention are the finger 2 subdomain mutants of human osteogenic protein-  
XX 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
XX inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
XX dental tissue, connective tissue, brain, liver and nerve tissue. The  
XX proteins can be used in conjunction with a biocompatible matrix e.g.,  
XX collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
XX cartilage and/or other mineralised skeletal or connective tissues e.g.,  
XX ligament, tendon, muscle, fibrocartilage, joint capsule and  
XX intervertebral discs. The OP-1 mutants can be used to repair diseased or  
XX damaged mammalian tissue and to prevent or substantially inhibit  
XX immune/inflammatory response-mediated tissue damage and scar tissue  
XX formation following an injury. Compared to the wild-type TGF-beta  
XX superfamily members, the mutant proteins have improved in vitro refolding  
XX properties in a pH range of 6-9, increased solubility in aqueous solution

CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139  
XX  
XX SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPPTQMAIS 20  
| | | | | | | | | | | | | | | | | | | | | | | | | |  
| | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 386 INPETHPKPCAPPTQMAIS 405

RESULT 151  
AAB09597

ID AAB09597 standard; protein; 431 AA.

AAB09597;

11-SEP-2000 (first entry)

Human OP-1 mutant protein N422D.

XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnary; mutant; mutein.

OS Homo sapiens.  
OS Synthetic.

WO200020607-A2.

13-APR-2000.

07-OCT-1999; 99WO-US023371.

07-OCT-1998; 98US-0103418P.

16-AUG-1999; 99US-00374958.

(STYC) STRYKER CORP.

Oppermann H, Tai M, McCartney J;

WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.

Claim 22; Page: 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
XX beta) superfamily members. These mutants comprise one or more amino acid  
XX substitutions in the base region of the finger 2 subdomain, and a C-  
XX terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
XX 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
XX amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
XX Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
XX beta superfamily proteins regulate developmental processes and include  
XX proteins such as the osteogenic proteins (OPs), bone morphogenetic  
XX proteins (BMPs), growth/differentiation factors (GDFs) and inhibins.  
XX Specific examples of TGF-beta superfamily mutants encompassed by the  
XX invention are the finger 2 subdomain mutants of human osteogenic protein-  
XX 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
XX inducing tissue morphogenesis in bone, non-mineralised skeletal tissue,  
XX dental tissue, connective tissue, brain, liver and nerve tissue. The

CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
 CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTOLNAIS 20  
 |||||  
 DB 386 INPETHPKPCCAPTOLNAIS 405

RESULT 152

AAB09609 standard; protein; 431 AA.

AC AAB09609;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein R426S.

KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KW transforming growth factor-beta; developmental regulation;  
 KW finger 2 subdomain; basic region; protein refolding; stability;  
 KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnery; mutant; mutein.

OS Homo sapiens.  
 OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PE 07-OCT-1999; 99WO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

PI Oppermann H, Tai M, Mcartney J;

WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.

PS Claim 23; Page; 162pp; English.

CC The invention relates to mutant TGF-beta (transforming growth factor-  
 CC beta) superfamily members. These mutants comprise one or more amino acid  
 CC substitutions in the base region of the finger 2 subdomain, and a C-  
 CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an

CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
 CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 CC beta superfamily proteins regulate developmental processes and include  
 CC proteins such as the osteogenic proteins (Ops), bone morphogenetic  
 CC proteins (Bmps), growth/differentiation factors (GDFs) and inhibitors.  
 CC Specific examples of TGF-beta superfamily mutants encompassed by the  
 CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
 CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
 CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
 CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
 CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTOLNAIS 20  
 |||||  
 DB 386 INPETHPKPCCAPTOLNAIS 405

RESULT 153

AAB09579 standard; protein; 431 AA.

AC AAB09579;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein H2247.

KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KW transforming growth factor-beta; developmental regulation;  
 KW finger 2 subdomain; basic region; protein refolding; stability;  
 KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnery; mutant; mutein.

OS Homo sapiens.  
 OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PE 07-OCT-1999; 99WO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

PI Oppermann H, Tai M, Mcartney J;

WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental

PT tissue and connective tissue and comprises a substitution in a region of  
the finger 2 domain.

XX Disclosure, Page: 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
beta) superfamily members. These mutants comprise one or more amino acid  
substitutions in the base region of the finger 2 subdomain, and a C-  
terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
beta superfamily proteins regulate developmental processes and include  
proteins such as the osteogenic proteins (OPs), bone morphogenetic  
proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
Specific examples of TGF-beta superfamily mutants encompassed by the  
invention are the finger 2 subdomain mutants of human osteogenic protein-  
1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
dental tissue, connective tissue, brain, liver and nerve tissue. The  
proteins can be used in conjunction with a biocompatible matrix e.g.,  
collagen, hydropapapate or carboxymethylcellulose for regenerating bone,  
cartilage and/or other mineralized skeletal or connective tissues e.g.,  
ligament, tendon, muscle, fibrocartilage, joint capsule and  
intervertebral discs. The OP-1 mutants can be used to repair diseased or  
damaged mammalian tissue and to prevent or substantially inhibit  
formation/inflammatory response-mediated tissue damage and scar tissue  
formation following an injury. Compared to the wild-type TGF-beta  
superfamily members, the mutant proteins have improved in vitro refolding  
properties in a pH range of 6-9, increased solubility in aqueous solution  
and improved stability and/or activity. Sequences AAB09547-B09548 and  
AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
protein-1 (OP-1). Note: The present sequence is not shown in the  
specification, but is derived from the wild-type human OP-1 sequence  
given on page 138-139

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNALS 20  
|||  
Db 386 INPETYKPCCAPTQLNALS 405

RESULT 154

AAB09608  
ID AAB09608 standard; protein; 431 AA.

XX AAB09608;

XX 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein N422S.

XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnery; mutant; mutein.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

XX 13-APR-2000.

XX 07-OCT-1999; 99WO-US023371.

XX 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

XX (STYC) STRYKER CORP.

XX Oppermann H, Tai M, Mccartney J;

XX WPI; 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
tissue and connective tissue and comprises a substitution in a region of  
the finger 2 domain.

XX Claim 23; Page: 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
beta) superfamily members. These mutants comprise one or more amino acid  
substitutions in the base region of the finger 2 subdomain, and a C-  
terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
beta superfamily proteins regulate developmental processes and include  
proteins such as the osteogenic proteins (OPs), bone morphogenetic  
proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
Specific examples of TGF-beta superfamily mutants encompassed by the  
invention are the finger 2 subdomain mutants of human osteogenic protein-  
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dental tissue, connective tissue, brain, liver and nerve tissue. The  
proteins can be used in conjunction with a biocompatible matrix e.g.,  
collagen, hydropapapate or carboxymethylcellulose for regenerating bone,  
cartilage and/or other mineralized skeletal or connective tissues e.g.,  
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intervertebral discs. The OP-1 mutants can be used to repair diseased or  
damaged mammalian tissue and to prevent or substantially inhibit  
formation/inflammatory response-mediated tissue damage and scar tissue  
formation following an injury. Compared to the wild-type TGF-beta  
superfamily members, the mutant proteins have improved in vitro refolding  
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and improved stability and/or activity. Sequences AAB09547-B09548 and  
AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
protein-1 (OP-1). Note: The present sequence is not shown in the  
specification, but is derived from the wild-type human OP-1 sequence  
given on page 138-139

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNALS 20  
|||  
Db 386 INPETYKPCCAPTQLNALS 405

RESULT 155

AAB09613  
ID AAB09613 standard; protein; 431 AA.

XX AAB09613;

XX 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein R421T.

XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnery; mutant; mutein.

OS Homo sapiens.  
OS Synthetic.  
PN WO200020607-A2.  
PD 13-APR-2000.  
XX  
XX  
PF 07-OCT-1999; 99WO-US023371.  
PR 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
PA (STYC ) STRYKER CORP.  
XX  
PI Oppermann H, Tai M, Mcartney J;  
XX WPI; 2000-303787/26.  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
XX Claim 23; Page; 162pp; English.  
XX  
XX The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
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CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139  
XX  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTQLNAIS 20  
Db 386 INPETHKPCCAPTQLNAIS 405  
RESULT 156  
AAB09603  
ID AAB09603 standard; protein; 431 AA.  
XX  
XX AAB09603;  
AC  
XX

DT 11-SEP-2000 (first entry)  
XX  
XX Human OP-1 mutant protein M422E.  
XX  
XX Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
XX transforming growth factor-beta; developmental regulation;  
XX finger 2 subdomain; basic region; protein refolding; stability;  
XX solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
XX connective tissue; cartilage; vulnery; mutant; mutein.  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
PN WO200020607-A2.  
PD 13-APR-2000.  
XX  
XX  
XX 07-OCT-1999; 99WO-US023371.  
PF  
PR 07-OCT-1998; 98US-0103418P.  
PR 16-AUG-1999; 99US-00374958.  
PA (STYC ) STRYKER CORP.  
XX  
PI Oppermann H, Tai M, Mcartney J;  
XX WPI; 2000-303787/26.  
XX  
XX Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.  
XX  
XX Claim 22; Page; 162pp; English.  
XX  
XX The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139  
XX  
SQ Sequence 431 AA;  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPETHKPCCAPTQLNAIS 20

Db 386 INPETHKPCCAPTQNLNALS 405

RESULT 157

AAB09582 AAB09582 standard; protein; 431 AA.

AC AAB09582;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein H2234.

KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;

KW transforming growth factor-beta; developmental regulation;

KW finger 2 subdomain; basic region; protein refolding; stability;

KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;

KW connective tissue; cartilage; vulnery; mutant; muten.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

WP1; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

CC specification, but is derived from the wild-type human OP-1 sequence

CC given on page 138-139

XX Sequence 431 AA;

QY 1 INPETHKPCCAPTQNLNALS 20

Db 386 INPETHKPCCAPTQNLNALS 405

RESULT 158

AAB09583 AAB09583 standard; protein; 431 AA.

AC AAB09583;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein H2233.

KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;

KW transforming growth factor-beta; developmental regulation;

KW finger 2 subdomain; basic region; protein refolding; stability;

KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;

KW connective tissue; cartilage; vulnery; mutant; muten.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

WP1; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

CC specification, but is derived from the wild-type human OP-1 sequence

CC given on page 138-139

XX Sequence 431 AA;

QY 1 INPETHKPCCAPTQNLNALS 20

Db 386 INPETHKPCCAPTQNLNALS 405

RESULT 158

AAB09583 AAB09583 standard; protein; 431 AA.

AC AAB09583;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein H2233.

KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;

KW transforming growth factor-beta; developmental regulation;

KW finger 2 subdomain; basic region; protein refolding; stability;

KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;

KW connective tissue; cartilage; vulnery; mutant; muten.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

WP1; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

XX WPI; 2000-303787/26.

CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
 CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139

XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALIS 20  
 DB 386 INPETHKPCCAPTQLNALIS 405

RESULT 159  
 AAB09602  
 ID AAB09602 standard; protein; 431 AA.  
 XX  
 AC AAB09602;  
 XX  
 DT 11-SEP-2000 (first entry)  
 XX  
 DE Human OP-1 mutant protein R421E.

XX  
 KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KW transforming growth factor-beta; developmental regulation;  
 KW finger 2 subdomain; basic region; protein refolding; stability;  
 KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnery; mutant; mutein.

XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN WO200020607-A2.  
 XX  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99WO-US023371.  
 XX  
 PR 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 XX  
 PA (STYC ) STRYKER CORP.  
 XX  
 PI Oppermann H, Tai M, McCartney J;  
 XX  
 DR WPI; 2000-303787/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.

XX  
 PS Claim 22; Page; 162pp; English.

XX  
 CC The invention relates to mutant TGF-beta (transforming growth factor-  
 CC beta) superfamily members. These mutants comprise one or more amino acid  
 CC substitutions in the base region of the finger 2 subdomain, and a C-  
 CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
 CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
 CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
 CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
 CC beta superfamily proteins regulate developmental processes and include

CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
 CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibins.  
 CC Specific examples of TGF-beta superfamily mutants encompassed by the  
 CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
 CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
 CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
 CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
 CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
 CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
 CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
 CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
 CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
 CC damaged mammalian tissue and to prevent or substantially inhibit  
 CC immune/inflammatory response-mediated tissue damage and scar tissue  
 CC formation following an injury. Compared to the wild-type TGF-beta  
 CC superfamily members, the mutant proteins have improved in vitro refolding  
 CC properties in a pH range of 6-9, increased solubility in aqueous solution  
 CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
 CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
 CC protein-1 (OP-1). Note: The present sequence is not shown in the  
 CC specification, but is derived from the wild-type human OP-1 sequence  
 CC given on page 138-139

XX  
 SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALIS 20  
 DB 386 INPETHKPCCAPTQLNALIS 405

RESULT 160  
 AAB09614  
 ID AAB09614 standard; protein; 431 AA.  
 XX  
 AC AAB09614;  
 XX  
 DT 11-SEP-2000 (first entry)  
 XX  
 DE Human OP-1 mutant protein M422T.

XX  
 KW Osteogenic protein-1; OP-1; human; TGF-beta superfamily;  
 KW transforming growth factor-beta; developmental regulation;  
 KW finger 2 subdomain; basic region; protein refolding; stability;  
 KW solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
 KW connective tissue; cartilage; vulnery; mutant; mutein.

XX  
 OS Homo sapiens.  
 OS Synthetic.  
 XX  
 PN WO200020607-A2.  
 XX  
 PD 13-APR-2000.  
 XX  
 PF 07-OCT-1999; 99WO-US023371.  
 XX  
 PR 07-OCT-1998; 98US-0103418P.  
 PR 16-AUG-1999; 99US-00374958.  
 XX  
 PA (STYC ) STRYKER CORP.  
 XX  
 PI Oppermann H, Tai M, McCartney J;  
 XX  
 DR WPI; 2000-303787/26.  
 XX  
 PT Transforming growth factor-beta superfamily member mutant induces tissue  
 PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
 PT tissue and connective tissue and comprises a substitution in a region of  
 PT the finger 2 domain.

PS Claim 23; Page; 162pp; English.

XX The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20

DB 386 INPETHKPCCAPTQNLNALS 405

RESULT 161

AAB09604 AAB09604 standard; protein; 431 AA.

AC AAB09604;

DT 11-SEP-2000 (first entry)

DE Human OP-1 mutant protein R426E.

XX Osteogenic protein-1, OP-1, human; TGF-beta superfamily;  
KM transforming growth factor-beta; developmental regulation;  
KW finger 2 subdomain; basic region; protein refolding; stability;  
KM solubility; tissue morphogenesis; regeneration; bone; dental tissue;  
KW connective tissue; cartilage; vulnery; mutant; murein.

OS Homo sapiens.

OS Synthetic.

PN WO200020607-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99MO-US023371.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374958.

PA (STYC) STRYKER CORP.

XX Opfermann H, Tai M, Mccartney J;  
XX WPI: 2000-303787/26.

PT Transforming growth factor-beta superfamily member mutant induces tissue  
PT morphogenesis in e.g. bone, non-mineralized skeletal tissue, dental  
PT tissue and connective tissue and comprises a substitution in a region of  
PT the finger 2 domain.

PS Claim 22; Page; 162pp; English.

CC The invention relates to mutant TGF-beta (transforming growth factor-  
CC beta) superfamily members. These mutants comprise one or more amino acid  
CC substitutions in the base region of the finger 2 subdomain, and a C-  
CC terminal residue selected from Arg, Ile, Leu, Ser and Ala. In the finger  
CC 2 subdomain, basic residues (e.g., Arg, Lys), or residues containing an  
CC amide group (e.g., Gln, Asn), are substituted with acidic residues (e.g.,  
CC Glu, Asp) or residues containing a hydroxyl group (e.g., Ser, Thr). TGF-  
CC beta superfamily proteins regulate developmental processes and include  
CC proteins such as the osteogenic proteins (OPs), bone morphogenetic  
CC proteins (BMPs), growth/differentiation factors (GDFs) and inhibitors.  
CC Specific examples of TGF-beta superfamily mutants encompassed by the  
CC invention are the finger 2 subdomain mutants of human osteogenic protein-  
CC 1 (OP-1) (AAB09576-B09615). Mutant TGF-beta proteins are used for  
CC inducing tissue morphogenesis in bone, non-mineralized skeletal tissue,  
CC dental tissue, connective tissue, brain, liver and nerve tissue. The  
CC proteins can be used in conjunction with a biocompatible matrix e.g.,  
CC collagen, hydroxyapatite or carboxymethylcellulose for regenerating bone,  
CC cartilage and/or other mineralized skeletal or connective tissues e.g.,  
CC ligament, tendon, muscle, fibrocartilage, joint capsule and  
CC intervertebral discs. The OP-1 mutants can be used to repair diseased or  
CC damaged mammalian tissue and to prevent or substantially inhibit  
CC immune/inflammatory response-mediated tissue damage and scar tissue  
CC formation following an injury. Compared to the wild-type TGF-beta  
CC superfamily members, the mutant proteins have improved in vitro refolding  
CC properties in a pH range of 6-9, increased solubility in aqueous solution  
CC and improved stability and/or activity. Sequences AAB09547-B09548 and  
CC AAB09576-B09615 represent mutant or chimeric forms of human osteogenic  
CC protein-1 (OP-1). Note: The present sequence is not shown in the  
CC specification, but is derived from the wild-type human OP-1 sequence  
CC given on page 138-139

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20

DB 386 INPETHKPCCAPTQNLNALS 405

RESULT 162

AA92442 AAY92442 standard; protein; 431 AA.

AC AAY92442;

DT 10-AUG-2000 (first entry)

DE Human osteogenic protein 1 (OP-1).

KW Osteogenic protein; OPX; seven-cysteine domain; osteogenic;  
KM chondrogenic. osteopathic; implant; transplantation.

OS Homo sapiens.

PH Key Location/Qualifiers

FT Domain 330..431  
FT /label=C-terminal\_7-cysteine\_domain

PN WO200020021-A1.  
 XX 13-APR-2000.  
 XX 30-JUL-1999; 99WO-US017222.  
 PF 06-OCT-1998; 98US-0103161P.  
 XX (STRYK) STRYKER CORP.  
 XX  
 PI Vukicevic S, Katic V, Sampath KT;  
 DR WPI; 2000-317644/27.  
 DR N-PSDB; AAA09361.  
 XX  
 PT Novel methods for repairing a defect in mammalian nonarticular cartilage  
 PT tissue or ligaments using an osteogenic protein in a biocompatible,  
 PT bioreabsorbable carrier.  
 XX  
 PS Disclosure; Page 55-56; 65pp; English.  
 XX  
 CC The specification concerns a novel method for repairing a defect in a non  
 CC articular cartilage tissue or a ligament of a mammal, which comprises  
 CC providing an osteogenic protein in a biocompatible, bioreabsorbable carrier  
 CC to the defect locus to induce the formation of functional replacement  
 CC cartilage. The methods and implants, promote chondrogenesis and are  
 CC useful for repairing or correcting a defect in a non-articular cartilage  
 CC tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the  
 CC glottis, ulceration of the larynx caused by syphilis, tuberculosis or  
 CC malignancy, defects resulting from mechanical trauma to the larynx or  
 CC trachea (including tracheotomy and laryngotomy), laryngeal cancer, and  
 CC defects of the ear, nose, ribs, intervertebral discs, and interarticular  
 CC menisci.  
 CC  
 SQ Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHVPCPCAPTQNLNALS 20  
 DB 386 INPETHVPCPCAPTQNLNALS 405  
 RESULT 163  
 AAY82158  
 ID AAY82158 standard; protein; 431 AA.  
 XX  
 AC AAY82158;  
 XX  
 DT 07-JUN-2000 (first entry)  
 XX  
 DE Human osteogenic protein OPI SEQ ID NO:2.  
 XX  
 KW Human; osteogenic protein; OPI; OPX; matrix; skeletal joint; bone;  
 KW articular cartilage; replacement body part.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US6027743-A.  
 XX  
 PD 22-FEB-2000.  
 XX  
 PF 02-JUN-1995; 95US-00458811.  
 XX  
 PR 03-JUN-1994; 94US-00253398.  
 XX  
 PA (STRYK) STRYKER CORP.  
 XX  
 PI Sampath KT, Rueger DC, Khouri RK;  
 XX  
 DR WPI; 2000-222942/19.

DR N-PSDB; AA295567.  
 XX  
 PT In vivo manufacture of autologous replacement body parts for replacing  
 PT skeletal joints.  
 XX  
 PS Example 1; Col 27-30; 21pp; English.  
 XX  
 CC The present invention describes devices (I) and methods (II) for the  
 CC manufacture in vivo of autogenous replacement body parts (especially  
 CC skeletal joints) comprising a number of distinct tissues. (I) and (II)  
 CC are used for the manufacture in vivo of autogenous replacement body parts  
 CC (especially skeletal joints) comprising a number of distinct tissues. The  
 CC use of (I) results in the formation of mechanically and functionally  
 CC viable tissues normally present at the site. These tissues are of an  
 CC appropriate size and have correct structural relationships to result in  
 CC the formation of a functional body part. In particular, the multi-tissue  
 CC replacement part whether produced in situ at the site of intended use or  
 CC remotely, becomes incorporated, integrating with adjacent tissues,  
 CC essentially maintaining its shape and avoiding abnormal reabsorption,  
 CC regardless of the conditions present at the recipient site. The devices  
 CC are capable of being precisely contoured and shaped to exactly match any  
 CC defect however complex the organ or organ shape it is used to replace.  
 CC The devices have virtually unlimited supply and are easy to obtain. The  
 CC devices have minimal donor site morbidity. The present sequence  
 CC represents the human osteogenic protein OPI, which is used in the  
 CC exemplification of the present invention  
 XX  
 SQ Sequence 431 AA;  
 XX  
 Query Match 100.0%; Score 111; DB 3; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHVPCPCAPTQNLNALS 20  
 DB 386 INPETHVPCPCAPTQNLNALS 405  
 RESULT 164  
 AAY57229  
 ID AAY57229 standard; protein; 431 AA.  
 XX  
 AC AAY57229;  
 XX  
 DT 06-MAR-2000 (first entry)  
 XX  
 DE Human osteogenic protein (hOP-1).  
 XX  
 KW Morphogen; bone formation; modulation; endochondral; OP-1; OP-2; DPP;  
 KW transforming growth factor; TGF-beta; osteogenic protein; BMP2; Vgr-1;  
 KW GDF-1; 60A protein; screening assay; therapeutic; cell death.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US5994131-A.  
 XX  
 PD 30-NOV-1999.  
 XX  
 PF 15-AUG-1997; 97US-00912088.  
 XX  
 PR 11-MAR-1991; 91US-00667274.  
 PR 30-AUG-1991; 91US-00752764.  
 PR 30-AUG-1991; 91US-00752861.  
 PR 28-AUG-1992; 92US-00938021.  
 PR 20-JUL-1994; 94US-00278729.  
 PR 26-MAY-1995; 95US-00451953.  
 XX  
 PA (CREA-) CREATIVE BIOMOLECULES INC.  
 XX  
 PI Smart JE, Oppertmann H, Kuberampath T, Rueger DC, Pang RHL;  
 PI Cohen CW, Ozkaynak E;  
 XX  
 DR WPI; 2000-038265/03.



DR N-PSDB; AA239477.  
XX Screening assay useful for identifying compounds which can act to  
PT modulate expression of a morphogen in a mammalian cell.  
XX  
PS Disclosure; Col 45-40; 48pp; English.  
XX

XX The invention provides a method for altering expression of a morphogen in  
CC a mammalian cell with a compound that modulates morphogen expression in  
CC epithelial cells identified in an assay for bone formation. The method  
CC uses a protein that induces endochondral bone formation such as OP-1, a  
CC morphogenic protein which is a member of the transforming growth factor  
CC (TGF-beta) superfamily. Other morphogens useful in the invention are  
CC osteogenic proteins (OP-1, OP-2 and BMP2) and related proteins such as  
CC DPP, Vgr-1, GDF-1 and the 60A protein. The method is used as a screening  
CC assay for identifying compounds which modulate the level of expression of  
CC a morphogen. The method allows the determination of substances useful in  
CC therapeutic treatments to modulate (stimulate or depress) morphogen  
CC expression and/or secretion in disease treatment. Compounds can be  
CC screened for their ability to modulate the effective systemic or local  
CC concentration of a morphogen. Compounds which can be screened include  
CC chemicals, biological response molecules such as lymphokines, cytokines,  
CC hormones or vitamins, plant extracts, microbial broths and extract  
CC mediums conditioned by eukaryotic cells, body fluids or tissue extracts.  
CC The assay has few steps and is easy to carry out producing results  
CC quickly. Drugs which result in cell death are easy to identify  
XX

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 165

AA02784 standard; protein; 431 AA.

AC AAB02784;

DT 22-AUG-2000 (first entry)

DE Human morphogenic protein OP-1 protein SEQ ID NO:39.

XX Tumour growth factor beta; TGF-beta; morphogenic protein; BMP; OP;  
KM bone morphogenic protein; osteogenic protein; mutant; modified;  
KM finger 2 subdomain; finger 1 domain; heel domain; chimeric protein;  
KM osteogenic; proliferative; antiinflammatory; tissue morphogenesis;  
KM tissue repair; regeneration; proliferation; differentiation.  
XX

OS Homo sapiens.

PN WO200020591-A2.

PD 13-APR-2000.

PF 07-OCT-1999; 99WO-US023370.

PR 07-OCT-1998; 98US-0103418P.

PR 16-AUG-1999; 99US-00374936.

PA (STRYK) STRYKER CORP.

PI Oppermann H, Tai M, McCartney J;

WPI; 2000-303776/26.

PT Novel TGF-beta superfamily mutant chimeric protein, useful for inducing  
tissue morphogenesis in e.g. bone, comprises a dimer consisting of one

PT monomer containing domains from two family members.

XX Claim 2; Page 125-126; 149pp; English.

XX The present invention describes a tumour growth factor beta (TGF-beta)  
CC superfamily chimeric protein (I) derived from at least 2 different  
CC members of the superfamily comprising a dimer with one monomer that  
CC contains a finger 2 domain derived from a first family member and a  
CC finger 1 domain and heel domain, both derived from a second family  
CC member. The monomer further comprises a conserved C-terminal cysteine  
CC skeleton. (I) has osteogenic, proliferative and antiinflammatory  
CC activities. The TGF-beta superfamily chimeric proteins (I) are useful for  
CC inducing tissue morphogenesis (i.e. molecules capable of tissue repair  
CC and regeneration and/or inhibiting inflammation) in bone, non-mineralised  
CC skeletal tissue, dental tissue, connective tissue, brain, liver and nerve  
CC and for inducing the proliferation and differentiation of uncommitted  
CC progenitor cells in a tissue-specific manner to support new tissue  
CC formation. AA29887 to AA29897 and AAB02748 to AAB02824 represent  
CC sequences used in the exemplification of the present invention  
XX

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 166

AA97369 standard; protein; 431 AA.

AC AAY97369;

DT 05-SEP-2000 (first entry)

DE Human osteogenic protein OP-1.

XX Human; osteogenic protein; OP-1; morphogen; cell differentiation; cancer;  
KM cell growth inhibition; BMP-7.

XX Homo sapiens.

PN WO200029012-A2.

PD 25-MAY-2000.

PF 12-NOV-1999; 99WO-US026636.

PR 13-NOV-1998; 98US-00191239.

PA (CREA-) CREATIVE BIOMOLECULES INC.

PI Sampath KT, Cohen CM, Rueger DC;

WPI; 2000-387615/33.

DR N-PSDB; AAA30332.

PT Administration of a morphogen to treat and alleviate the symptoms of  
PT cancer, such as abnormal cell morphology, abnormal enzyme levels  
PT opportunistic infection and pain.

PS Claim 1; Page 69-71; 75pp; English.

XX The present sequence is the human osteogenic protein 1 (OP-1) (also known  
CC as BMP-7). OP-1 is a bone morphogen which induces cellular  
CC differentiation and thus prevents cell proliferation. Morphogens can also  
CC be used to treat cancer, as it has been shown that they can inhibit  
CC tumour cell proliferation as well. The types of cancer include adrenal,  
CC anus, bladder, bone, brain, breast, cervix, colon, corpus, endocrine,



PS Disclosure, Col 49-52; 46pp; English.

XX The present invention discloses compositions containing the murine OP-3  
CC protein for use in the induction of tissue formation in a mammal. They  
CC can be used in the replacement of diseased or damaged tissue, to inhibit  
CC the formation of scar tissue, to enhance the viability of transplanted  
CC tissue, to increase progenitor cell populations, in the treatment of  
CC blood disorders, to reduce tissue damage associated with psoriasis and  
CC dermatitis, and in the treatment of tissue disorders where loss of  
CC function is due to ageing, osteoporosis and degenerative diseases, such  
CC as Alzheimer's disease

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 169  
AAB37614  
ID AAB37614 standard; protein; 431 AA.

XX AAB37614;  
XX 27-FEB-2001 (first entry)

DE Human OP-1.

KW Human; OP-1; contraceptive; antifertility; gynaecological; morphogen;  
KW luteinisation inhibitor; osteogenic protein-1; menopause;  
KW progesterone synthesis; oestrogen synthesis.

OS Homo sapiens.

XX WO200006620-A2.

XX 09-NOV-2000.

XX 28-APR-2000; 2000WO-US011501.

XX 30-APR-1999; 99US-0131721P.

XX 27-APR-2000; 2000US-00561171.

PA (CREA-) CREATIVE BIOMOLECULES INC.

XX Sampath KS;

XX WPI; 2001-024771/03.

XX N-PSDB; AAC83806.

XX Use of morphogen, a luteinization inhibitor, for increasing fertility,  
XX alleviating symptoms of menopause, delaying onset of menopause and for  
XX contraception.

XX Claim 1; Page 62-64; 74pp; English.

XX The present invention relates to a morphogen which is a luteinisation  
XX inhibitor. The morphogen comprises the C-terminal seven-cysteine skeleton  
XX of human osteogenic protein-1 (OP-1). The present sequence is the full-  
XX length OP-1 protein. The morphogen comprises amino acids 330-431 of the  
XX present sequence. The morphogen is useful for increasing fertility, and  
XX alleviating symptoms of menopause, delaying onset of menopause, and  
XX attenuating progesterone synthesis and inducing or increasing oestrogen  
XX synthesis in atretic or healthy ovarian follicles of a subject. Compounds  
XX which interfere with the binding of the morphogen to its receptor are  
XX useful for contraception

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 170  
AAU09117  
ID AAU09117 standard; protein; 431 AA.

XX AAU09117;  
XX 16-JAN-2002 (first entry)

DE Human morphogenic protein OP-1.

KW Human; morphogenic protein; OP-1; osteogenic protein-1; vulnery;  
KW vasotrophic; antiangiogenic; immunosuppressive; osteopathic; cardiac;  
KW angiogenesis; reproduction; wound healing; organ transplantation;  
KW bone repair; ischaemic heart disease; tumour; rheumatoid arthritis;  
KW diabetic retinopathy; myocardial infarction; inflammatory disease; ulcer;  
KW ischaemic peripheral vascular disease; BMP7; bone morphogenic protein;  
KW morphogenic protein stimulatory factor; MSPF.

XX Homo sapiens.

XX Key Location/Qualifiers

XX Domain 330..431

XX WO200174379-A2.

XX 11-OCT-2001.

XX 23-MAR-2001; 2001WO-US009451.

XX 31-MAR-2000; 2000US-00540466.

XX (STYC) STRYKER CORP.

XX Ripamonti U, Ramosheli LN;

XX WPI; 2001-656972/75.

XX N-PSDB; AAS15216.

XX Inducing angiogenesis in a mammal required in physiological processes and  
XX in treating pathophysiologicals such as reproduction, wound healing,  
XX ischemic heart disease, by administering a morphogenic protein.

XX Claim 6; Page 77-77; 81pp; English.

XX The invention relates to inducing angiogenesis in a mammal by  
XX administering a morphogenic protein which is not bone morphogenic  
XX protein (BMP)-2 or GDF-5 improving the angiogenic inductive activity of  
XX the morphogenic protein in a mammal by co-administering a morphogenic  
XX protein stimulatory factor (MSPF). The method is useful for inducing  
XX angiogenesis in a mammal required in physiological processes and treating  
XX pathophysiologicals such as reproduction, wound healing, organ  
XX transplantation, bone repair, ischaemic heart disease, ischaemic  
XX peripheral vascular disease, tumours, rheumatoid arthritis, diabetic  
XX retinopathy, myocardial infarction, inflammatory diseases such as ulcers.  
XX The present sequence represents human osteogenic protein, OP-1 (also  
XX known as bone morphogenic protein 7), a morphogenic protein useful in the  
XX method of the invention

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTQNAIS 20  
 XX ||||||||||||||||  
 DB 386 INPETHKPCAPQTQNAIS 405

RESULT 171  
 ID AAE00386 standard; protein: 431 AA.  
 AAE00386  
 AC AAE00386;  
 DT 19-JUN-2001 (first entry)  
 DE Human osteogenic protein 1 (hOP-1).  
 XX  
 XX Human osteogenic protein 1; hOP-1; osteopathic; gene therapy; BMP;  
 KM bone morphogenic protein; tissue formation; cell proliferation; SLE;  
 KM systemic lupus erythematosus; jaw bone defect; psoriatic arthritis;  
 KM congenital disease; osteoarthritis; rheumatoid arthritis; tissue disease;  
 KM inflammatory joint disease; ulcerative colitis; Whipple's disease;  
 KM thrombotic thrombocytopenic purpura; bursitis; ankylosing spondylitis;  
 KM rheumatic fever; amyloidosis.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT 330..431  
 FT Domain /label=Seven\_cysteine\_domain  
 FT 335..431  
 FT Domain /label=Six\_cysteine\_domain  
 XX  
 XX WO200123563-A2.  
 XX  
 XX 05-APR-2001.  
 PD  
 PE 27-SEP-2000; 2000WO-US026528.  
 PF  
 PR 27-SEP-1999; 99US-0156261P.  
 XX  
 XX (STRYKER) STRYKER CORP.  
 PA  
 XX Lee JC, Yeh LC;  
 PI  
 XX WPI; 2001-266158/27.  
 DR  
 DR N-PSDB; AAD03656.  
 XX  
 XX Improving tissue inductive capability of morphogenic protein at target  
 PT locus in mammal involves administering morphogenic protein with a hormone  
 PT and its soluble receptor, to the target locus.  
 PT  
 XX  
 XX Claim 30; Page 56-58; 63pp; English.

CC The present sequence is human osteogenic protein 1 (hOP-1) also referred  
 CC as bone morphogenic protein 7 (BMP-7). The invention relates to a method  
 CC for improving the tissue inductive capability of a morphogenic protein in  
 CC a mammal by administering the morphogenic protein, a hormone, and a  
 CC soluble receptor of the hormone, where the morphogenic protein's  
 CC capability to induce tissue formation when accessible to the progenitor  
 CC cell in the mammal, is enhanced by the hormone-receptor combination. The  
 CC method is useful for improving the tissue inductive capability of a  
 CC morphogenic protein at a target locus e.g. a jaw bone defect such as a  
 CC fracture, a non-union fracture, a critical or non-critical size defect,  
 CC an osteochondral defect, tissue (cartilage or soft tissue or neural  
 CC tissue) degenerative condition, a fusion or a bony void, in a mammal. The  
 CC morphogenic devices are useful for treating tissue injuries, tissue  
 CC degeneration and other tissue diseases, congenital diseases and  
 CC developmental abnormalities of cartilage, bone and other tissues.  
 CC Osteogenic device is useful in the treatment of osteoarthritis. The  
 CC morphogenic compositions and devices are also useful for treating  
 CC inflammatory joint diseases such as rheumatoid and psoriatic arthritis,  
 CC bursitis, ulcerative colitis, SLE-systemic lupus erythematosus, Whipple's

CC disease, ankylosing spondylitis, rheumatic fever, amyloidosis, thrombotic  
 CC thrombocytopenic purpura and relapsing polychondritis

CC  
 XX Sequence 431 AA;  
 SQ

Query Match 100.0%; Score 111; DB 4; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTQNAIS 20  
 XX ||||||||||||||||  
 DB 386 INPETHKPCAPQTQNAIS 405

RESULT 172  
 ID AAB82695 standard; protein: 431 AA.  
 AAB82695  
 AC AAB82695;  
 DT 15-OCT-2001 (first entry)  
 DE Human osteogenic protein OP-1.  
 XX  
 XX Osteogenic protein; OP-1; human; bone; cartilage; fracture;  
 KM osteochondral defect; subchondral defect; degenerative disease;  
 KM osteochondritis desiccans; osteopathy; vulnery; therapy.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT 330..431  
 FT Domain /note="7 cysteine domain, present in osteogenically  
 FT active forms of OP-1"  
 FT  
 XX  
 XX US2001016646-A1.  
 XX  
 XX 23-AUG-2001.  
 PD  
 PE 20-MAR-1998; 98US-00045331.  
 PF  
 PR 20-MAR-1998; 98US-00045331.  
 XX  
 XX (RUEGER) RUEGER D C.  
 PA (TUCKER) TUCKER M A.  
 PA (CHAN) CHANG A.  
 XX  
 XX Rueger DC, Tucker MA, Chang A;  
 PI  
 XX WPI; 2001-513983/56.  
 DR  
 DR N-PSDB; AAB26404.  
 XX  
 XX Implant for inducing local bone or cartilage formation, comprising  
 PT osteogenic proteins, non-synthetic polymeric matrixes and binding agents.  
 PT  
 XX  
 XX Disclosure; Page 50-51; 59pp; English.

CC The present sequence is that of human osteogenic protein OP-1. The  
 CC invention is based on the discovery that admixing osteogenic protein and  
 CC a non-synthetic, non-polymeric matrix such as collagen or beta-tricalcium  
 CC phosphate with a binding agent yields an improved osteogenic device with  
 CC enhanced bone and cartilage repair capabilities. The osteogenic protein  
 CC may be OP-1, OP-2, bone morphogenic protein (BMP)-2, BMP-4, BMP-5, BMP-6,  
 CC BMP-9, BMP-10, BMP-11, BMP-12, BMP-15, BMP-16, DPP, Vg1, Vgr, 60A  
 CC protein, GDF1, GDF3, GDF5, GDF6, GDF7, GDF8, GDF9, GDF10, GDF11, or their  
 CC variants, and is especially OP-1. The osteogenic devices promote  
 CC accelerated formation of repair tissue with enhanced stability using less  
 CC osteogenic protein than previous devices. Defects susceptible to repair  
 CC include critical size defects, non-critical size defects, non-union  
 CC fractures, fractures, osteochondral defects and subchondral defects  
 CC (claimed), and defects resulting from degenerative diseases such as  
 CC osteochondritis desiccans

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNALIS 20  
|||  
DB 386 INPETHPKPCCAPTQLNALIS 405

RESULT 173  
AAU97017

ID AAU97017 standard; protein; 431 AA.

XX AAU97017;

XX 24-SEP-2002 (first entry)

XX Human osteogenic protein (OP-1).

XX Human; osteogenic protein; OP-1; neuroprotective;  
XX anyotropic lateral sclerosis; multiple sclerosis; spinal cord injury;  
XX morphogen; nerve cell adhesion molecule; N-CAM; LI isoform; BMP2B;  
XX motor function; OP-2; 60A; GDF-1; bone morphogenetic protein; BMP2A;  
XX BMP2B; DPP; Vg1; Vgr-1; BMP3; BMP5; BMP6.

XX Homo sapiens.

XX US2002049159-A1.

XX 25-APR-2002.

XX 25-SEP-1997; 97US-00937755.

XX 11-MAR-1991; 91US-00667274.

XX 30-AUG-1991; 91US-00752764.

XX 30-AUG-1991; 91US-00753059.

XX 31-JUL-1992; 92US-00922813.

XX 23-SEP-1993; 93US-00126100.

XX 16-JUN-1994; 94US-00260675.

XX (RUEGER/) RUEGER D C.

XX (SAMPATH/) SAMPATH K T.

XX (OPPERMANN/) OPPERMANN H.

XX (PANG/) PANG R H L.

XX (COHEN/) COHEN C M.

XX Rueger DC, Sampath KT, Oppermann H, Pang RHL, Cohen CM;

XX WPI; 2002-415042/44.

XX N-PSDB; ABK51437.

XX New treatment for amyotrophic lateral sclerosis, multiple sclerosis or

XX spinal cord injury comprises administering morphogen which stimulates

XX expression of nerve cell adhesion molecule.

XX Claim 1; Page 33-34; 57pp; English.

XX The invention relates to a method of treating amyotrophic lateral  
XX sclerosis, multiple sclerosis or a spinal cord injury, comprising  
XX administering a morphogen which stimulates production of an nerve cell  
XX adhesion molecule (N-CAM) or LI isoform by an NG108-15 cell in vitro.  
XX Also described is a method of restoring or preserving nerve function in a  
XX mammal afflicted with or at risk from amyotrophic lateral sclerosis,  
XX multiple sclerosis or a spinal cord injury comprising administering a  
XX morphogen which is human osteogenic protein (OP-1), mouse OP-1, human OP-  
XX 2, mouse OP-2, 60A, GDF-1 (undefined), bone morphogenetic protein  
XX (BMP) 2A, BMP2B, DPP (undefined), Vg1 (undefined), Vgr-1, BMP3, BMP5, or  
XX BMP6. The present sequence represents the amino acid sequence of human OP  
XX -1 which was used as a reference sequence to generate generic  
XX polypeptides for use in the method of the invention

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNALIS 20  
|||  
DB 386 INPETHPKPCCAPTQLNALIS 405

RESULT 174  
AAE25993

ID AAE25993 standard; protein; 431 AA.

XX AAE25993;

XX 15-NOV-2002 (first entry)

XX Human osteogenic protein 1 (hOP-1).

XX Central nervous system function; morphogen; ischaemia; grasp; trauma;  
XX motor coordination function; posture; balance; sensory perception;  
XX taste proprioception; olfaction; gait; human osteogenic protein 1; hOP-1;  
XX bone morphogenic protein; BMP.

XX Homo sapiens.

XX Location/Qualifiers

XX Key 30..292

XX Domain /label=Pro\_domain

XX Domain 48..292

XX Domain /note="Pro domain fragment"

XX Domain 158..292

XX Domain /note="Pro domain fragment"

XX Domain 330..431

XX Domain /label=C-terminal\_seven\_cysteine\_domain

XX Domain 335..431

XX Domain /label=C-terminal\_six\_cysteine\_domain

XX US6407060-B1.

XX 18-JUN-2002.

XX 21-MAR-1997; 97US-00828281.

XX 22-MAR-1996; 96US-00620444.

XX (CURIS) CURIS INC.

XX Charrette MF, Finklestein SP;

XX WPI; 2002-573260/61.

XX N-PSDB; AAD43021.

XX Method for enhancing recovery of central nervous system function  
XX comprises administration of a morphogen comprising a dimeric protein and  
XX a pair of folded polypeptides to a mammal suffering trauma or ischemia.

XX Claim 1; Col 37-40; 41pp; English.

XX The invention relates to a method for enhancing recovery of central  
XX nervous system function. The method involves administration of a  
XX morphogen comprising a dimeric protein and a pair of folded polypeptides  
XX to a mammal suffering trauma or ischemia, where the morphogen is not  
XX transforming growth factor beta (TGF-beta). The method is useful for  
XX enhancing recovery of central nervous system function, i.e. motor  
XX coordination function (e.g. posture, balance, grasp or gait) or sensory  
XX perception (e.g. speech, vision, touch, taste proprioception or  
XX olfaction). The present sequence is human osteogenic protein 1 (hOP-1).  
XX OP-1 also referred as bone morphogenic proteins (BMPs) are classified  
XX under the subgroup of TGF-beta superfamily of growth factors

Sequence 431 AA;  
Query Match  
Best Local Similarity 100.0%; Score 111; DB 5; Length 431;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
RESULT 175  
ABR82416  
ID ABR82416 standard; protein; 431 AA.  
XX  
XX ABR82416;  
XX  
XX 08-JAN-2003 (first entry)  
XX  
XX Human osteogenic protein-1 (OP-1).  
XX  
XX TCP; beta-tricalcium phosphate; bone; osteopathic; prosthetic; OP-1;  
XX bone implantation; osteogenic protein; human.  
XX  
XX Homo sapiens.  
XX  
XX WO200270029-A2.  
XX  
XX 12-SEP-2002.  
XX  
XX 26-FEB-2002; 2002WO-US005827.  
XX  
XX 02-MAR-2001; 2001US-00798518.  
XX 21-SEP-2001; 2001US-00960789.  
XX  
XX (STYC) STRYKER CORP.  
XX  
XX Dalal PS, Dimaano GR, Toth CA, Kulkarni SC;  
XX WPI; 2002-740751/80.  
XX N-PDSB; ABV73237.  
XX  
XX Porous beta-tricalcium phosphate material useful for bone implantation in  
XX implantable prosthetic device e.g. hip device, fusion cage or  
XX maxillofacial device, comprises several pores of specific diameter size.  
XX  
XX PS Disclosure; Page 143-144; 151pp; English.  
XX  
XX The invention relates to a porous beta-tricalcium phosphate (TCP) that  
XX comprises several pores. The pores are single separate voids having a  
XX pore diameter size of 20 - 500 (preferably 410 - 460, 40 - 190, 20 - 95  
XX or 50 - 125) micrometers. The beta-TCP induces bone formation, delivers  
XX bioactive agent at a site requiring cartilage formation, improves  
XX osteoconductivity and regeneration of bone tissue in a living body,  
XX repairs a bone defect in a human or animal. The porous beta-TCP granules  
XX are biocompatible and support the development of new bone throughout its  
XX structural form. The beta-TCP can be used in prosthetic device (e.g. hip  
XX device, fusion cage or maxillofacial device). It can be used for bone  
XX implantation in implantable device. The present sequence represents a  
XX human osteogenic protein-1 (OP-1)  
XX  
XX Sequence 431 AA;  
Query Match  
Best Local Similarity 100.0%; Score 111; DB 5; Length 431;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405  
RESULT 176

ABUS6730  
ID ABUS6730 standard; protein; 431 AA.  
XX  
XX AC ABUS6730;  
XX  
XX 02-APR-2003 (first entry)  
XX  
XX DE Lung cancer-associated polypeptide #323.  
XX  
XX KW Lung cancer-associated polypeptide; cytosolic; emphysema;  
XX antiinflammatory; antisthmatic; non-small cell lung cancer; atelectasis;  
XX small cell lung cancer; benign lesion; precancerous lesion; bronchitis;  
XX chronic obstructive pulmonary disease; hypersensitivity pneumonitis;  
XX interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.  
XX  
XX OS Unidentified.  
XX  
XX PN WO200286443-A2.  
XX  
XX 31-OCT-2002.  
XX  
XX 18-APR-2002; 2002WO-US012476.  
XX  
XX 18-APR-2001; 2001US-0284770P.  
XX 10-MAY-2001; 2001US-0290492P.  
XX 09-NOV-2001; 2001US-0339245P.  
XX 13-NOV-2001; 2001US-0350666P.  
XX 29-NOV-2001; 2001US-0334370P.  
XX 12-APR-2002; 2002US-0372246P.  
XX  
XX PA (EOSB) EOS BIOTECHNOLOGY INC.  
XX  
XX PI Azi N, Murray R;  
XX WPI; 2003-093161/08.  
XX DR N-PDSB; ABX76459.  
XX  
XX PT Detecting a lung cancer-associated transcript in a cell from a patient  
XX for treating lung cancer, by contacting a biological sample from the  
XX patient with a polynucleotide that exhibits increased or decreased  
XX expression in lung cancer.  
XX  
XX PS Claim 27; Page 438; 453pp; English.  
XX  
XX The invention relates to a method for detecting a lung cancer-associated  
XX transcript in a cell from a patient, comprising contacting a biological  
XX sample from the patient with a polynucleotide that selectively hybridizes  
XX to a sequence that is at least 80 % identical to a gene that exhibits  
XX increased or decreased expression in lung cancer samples. Lung cancer-  
XX associated polynucleotides and polypeptides are used for identifying a  
XX compound that modulates a lung cancer-associated polypeptide, for  
XX inhibiting proliferation of a lung cancer-associated cell to treat lung  
XX cancer in a patient and for treating a mammal having lung cancer by  
XX administering a modulatory compound identified. The methods are useful  
XX for treating lung cancer, such as small cell lung cancer, non-small cell  
XX lung cancer or other benign or precancerous lesions, e.g. atelectasis,  
XX emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,  
XX hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and  
XX bronchiectasis. The genes, polynucleotides and polypeptides are useful  
XX for diagnostic purposes and as targets for screening for therapeutic  
XX compounds that modulate lung cancer, such as antibodies. Sequences  
XX CC ABUS6408-ABUS6745 represent lung cancer-associated polypeptides of the  
XX invention  
XX  
XX Sequence 431 AA;  
Query Match  
Best Local Similarity 100.0%; Score 111; DB 6; Length 431;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

## RESULT 177

ABR44022

ID ABR44022 standard; protein; 431 AA.

AC ABR44022;

DT 04-AUG-2003 (first entry)

DE Human osteogenic protein-1 (OP-1).

KW Bone precursor; osteopathic; bone formation; osteoporosis; human; osteogenic protein; bone morphogenic protein; BMP; OP-1.

OS Homo sapiens.

PN W02003024316-A2.

PD 27-MAR-2003.

PF 20-SEP-2002; 2002MO-US029966.

PR 21-SEP-2001; 2001US-00960421.

XX (STYC) STRYKER CORP.

PI Dalal PS, Landeryou TJ, Toch CA, Kulkarni SC;

DR WPI; 2003-441013/41.

DR N-PSDB; ACC48170.

PT Bone precursor composition useful for inducing bone formation comprises cement mixture or solid cement and pore-forming agent.

XX Disclosure; Page 98-99; 106pp; English.

CC The invention relates to a bone precursor composition that comprises cement mixture or solid cement and a pore-forming agent. The pore-forming agent has a particle size of 20 - 500 micro M. The composition is useful for inducing bone formation; in prosthetic devices e.g. a hip device, fixation cage and a maxillofacial device; in ligament repair such as anterior cruciate ligament fixation or ligament attachment in the appendicular system to assist in the integration of ligament and bone; in clinical procedures for joint arthroplasty in hips, knees, elbows, and other joints where a diseased or damaged natural joint is replaced by a prosthetic joint; in clinical procedures such as vertebroplasty. Also useful for treating osteoporosis. The present sequence represents a human osteogenic protein (OP-1), a bone morphogenic protein (BMP) that can be used as a bioactive agent in the bone precursor composition of the invention.

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 6; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06; Indels 0; Gaps 0;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNNAIS 20

DB 386 INPETHKPCCAPTQLNNAIS 405

## RESULT 178

ABU63427

ID ABU63427 standard; protein; 431 AA.

AC ABU63427;

DT 07-OCT-2003 (first entry)

DE Human osteogenic protein 1, OP1.

KW Human; OP1; osteogenic protein 1; biodegradable matrix; autologous replacement body; non-mineralised tissue; skeletal joint; graft rejection.

OS Homo sapiens.

PN US2003064090-A1.

PD 03-APR-2003.

PF 27-FEB-2002; 2002US-00083825.

PR 03-JUN-1994; 94US-00253398.

PR 02-JUN-1995; 95US-00459129.

PR 13-APR-2000; 2000US-00547601.

XX (KHOU// KHOURI R. K.

XX (SAMP// SAMPATH K.T.

XX (RUEG// RUEGER D.C.

XX Khouri RK, Sampath KT, Rueger DC;

DR WPI; 2003-576374/54.

DR N-PSDB; ACD28509.

PT Device for implanting in vivo functional replacement body parts, comprises biodegradable matrix and osteogenic protein to induce formation and to permit regeneration of new distinct tissue(s).

XX Disclosure; Page 15-16; 22pp; English.

CC The invention relates to a device for implanting in vivo functional replacement body parts, comprises biodegradable matrix and an osteogenic protein (e.g. OP1, osteogenic protein 1) to induce formation and to permit regeneration of new distinct tissue(s). The matrix defines structure, allows attachment of infiltrating cells, comprises residues derived from distinct tissue(s) and having dimensions and shape which mimic body part to be replaced. Also, included are a method for inducing in a mammal the formation of an autologous replacement body part comprising several distinct tissues, a method for repairing in vivo articular cartilage on the surface of a bone and a method for restoring in a mammal a non-mineralised tissue in a skeletal joint. The device is used for the manufacture of in vivo autogenous replacement body parts such as mammalian skeletal joints. The device is biocompatible; non-pathogenic and non-antigenic and thereby prevents graft rejection in vivo. The composition and method enables to provide complete reconstruction of a mechanically and functionally viable skeletal joint. The present sequence represents human OP1.

SQ Sequence 431 AA;

Query Match 100.0%; Score 111; DB 6; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.8e-06; Indels 0; Gaps 0;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNNAIS 20

DB 386 INPETHKPCCAPTQLNNAIS 405

## RESULT 179

ABU61634

ID ABU61634 standard; protein; 431 AA.

AC ABU61634;

DT 12-AUG-2003 (first entry)

DE Human osteogenic protein-1, OP-1.

KW OP1; osteogenic protein-1; central nervous system; ischaemia; trauma; tissue-specific morphogenesis; OP-2; 60A; GDF-1; BMP-2A; BMP2B; DPF;

KW growth differentiation factor-1; bone morphogenetic protein-2A; Vgl;

Vgr-1; BMP-3; BMP-5; BMP-6; motor coordination function; posture; balance; grasp; gait; sensory perception; speech; stroke; hypertension; hypertensive cerebral vascular disease; aneurysm; angiotensin; blood dyscrasia; cardiac failure; cardiac arrest; cardiogenic shock; kidney failure; septic shock; head trauma; spinal cord trauma; seizure; tumour bleeding; loss of blood volume; blood pressure; human; morphogenic protein.

Homo sapiens.

Key 38.139  
Location/Qualifiers  
Domain /note="C-terminal seven-cysteine domain. This domain is specifically claimed in claim 1"

US2003022830-A1.  
30-JAN-2003.  
01-FEB-2002; 2002US-00062370.  
22-MAR-1996; 96US-0062044.  
21-MAR-1997; 97US-00828281.  
(CHAR/) CHARETTE M F.  
(FINX/) FINKLESTEIN S P.  
Charette MF, Finklestein SP;  
WPI; 2003-479493/45.  
N-PSDB; ACA61450.  
Enhancing recovery of central nervous system function e.g. ischemia and trauma, in a mammal, by administering morphogen comprising a dimeric protein capable of inducing tissue-specific morphogenesis, to the mammal.  
Claim 1; Page 21-22; 39pp; English.

The invention relates to enhancing recovery of central nervous system function in a mammal, involves administering an effective amount of a morphogen to a mammal afflicted with a central nervous system injury selected from ischemia or trauma. The morphogen comprises a dimeric protein having the property of inducing tissue-specific morphogenesis in the mammal and comprises a pair of folded polypeptides. Each folded polypeptide has an amino acid sequence having at least 70 % homology with the C-terminal seven-cysteine domain of human OP-1, (residues 38-139 the sequence appearing as ABU61634). The morphogen is selected from human osteogenic protein (OP)-1, mouse OP-1, human OP-2, mouse OP-2, 60A (Drosophila homologue), growth differentiation factor (GDF)-1, bone morphogenetic protein (BMP)-2A, BMP-2B, DPP (Drosophila homologue), Xenopus Vgr-1, Vgr-1 (murine homologue of BMP-6), BMP-3, BMP-5 and BMP-6, their conservative substitution variants, or the generic morphogens derived from the above proteins appearing as ABU61631, ABU61632, ABU61633, ABU61635 and ABU61636. The method is useful for enhancing recovery of central nervous system (CNS) function, including motor coordination function (such as posture, balance, grasp and gait), sensory perception (such as vision, hearing, touch, taste, proprioception and olfaction) and speech, in a mammal afflicted with CNS injury such as ischemia or trauma, preferably in human. The method is also useful for treating CNS function disorder including stroke caused by hypertension, hypertensive cerebral vascular disease, rupture of an aneurysm, angiotensin, blood dyscrasia, cardiac failure, cardiac arrest, cardiogenic shock, kidney failure, septic shock, head trauma, spinal cord trauma, seizure, bleeding from a tumour, or other loss of blood volume and/or pressure. The present sequence represents human OP-1

Sequence 431 AA:  
Query Match 100.0%; Score 111; DB 7; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQNLNALS 20

DB 386 INPETHKPCCAPTQNLNALS 405  
RESULT 180  
ABR62827  
ID ABR62827 standard; protein; 431 AA.  
XX  
XX ABR62827;  
XX  
XX 04-DEC-2003 (first entry)  
XX  
XX Human bone morphogenic protein 7.  
XX  
XX Bone morphogenic protein 7; BMP-7; human; glaucoma; diagnosis; therapy;  
XX  
XX ophthalmological.  
XX  
XX Homo sapiens.  
XX  
XX WO2003055443-A2.  
XX  
XX 10-JUL-2003.  
XX  
XX 31-OCT-2002; 2002WO-US035251.  
XX  
XX 31-OCT-2001; 2001US-0334852P.  
XX  
XX (ALCO-) ALCON INC.  
XX (UNYNT-) UNIV NORTH TEXAS HEALTH SCI CENT.  
XX  
XX Clark AF, Wordinger RJ;  
XX  
XX WPI; 2003-559253/52.  
XX  
XX N-PSDB; ACF05923.  
XX  
XX Diagnosing glaucoma in a sample comprises detecting altered expression of bone morphogenic proteins in sample from a cell or bodily fluid.  
XX  
XX Disclosure: Fig 4a-c; 55pp; English.

The present sequence is the protein sequence of human bone morphogenic protein 7 (BMP-7). RT-PCR showed BMP-7 to be expressed in the human trabecular meshwork and optic nerve head. A claimed method for diagnosing glaucoma involves detecting altered expression of a BMP family member such as BMP-7 by PCR in a sample obtained e.g. from blood or buccal cells. A claimed method for treating glaucoma comprises administering an agonist of BMP-2, BMP-4, BMP-5, BMP-7 or Smad 1/5, or an antagonist of chordin, gremlin or follistatin. A claimed method of identifying a therapeutic agent for treatment of glaucoma comprises identifying a substance that inhibits or stimulates BMP-induced Smad signalling CC pathways or BMP-regulated gene expression, using recombinant cells expressing BMP-2A, BMP-4, BMP-5 or BMP-7

Sequence 431 AA:  
Query Match 100.0%; Score 111; DB 7; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQNLNALS 20  
Db 386 INPETHKPCCAPTQNLNALS 405  
RESULT 181  
ADB80494  
ID ADB80494 standard; protein; 431 AA.  
XX  
XX ADB80494;  
XX  
XX 04-DEC-2003 (first entry)  
XX  
XX Ovarian cancer-associated protein #29.



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us-10-619-910-11.oct24.rag

Page 93

```
XX cytostatic; gene therapy; vaccine; ovarian cancer; diagnosis;
KM post-operative chemotherapy; radiation therapy; tumour prognosis;
KM pre-cancerous lesion detection.
XX
OS Homo sapiens.
XX
XX WO2002102235-A2.
XX
XX 27-DEC-2002.
XX
XX 18-JUN-2002; 2002WO-US019297.
XX
XX 18-JUN-2001; 2001US-0299234P.
XX
XX 27-AUG-2001; 2001US-0315287P.
XX
XX 05-SEP-2001; 2001US-0317544P.
XX
XX 13-NOV-2001; 2001US-0350666P.
XX
XX 12-APR-2002; 2002US-0372246P.
XX
XX (EOSB-) EOS BIOTECHNOLOGY INC.
XX
XX Mack DH, Gish KC;
XX
XX WPI; 2003-167431/16.
XX
XX N-PSDB; ADB80493.
XX
XX
XX Detecting an ovarian cancer-associated transcript in a cell from a
PT patient, comprises contacting a biological sample from the patient with a
PT polynucleotide that hybridizes to an ovarian cancer gene.
XX
XX
XX Claim 13; Page 294; 332pp; English.
XX
XX The invention relates to a method of detecting an ovarian cancer-
CC associated transcript in a cell from a patient, by contacting a
CC biological sample from the patient with a polynucleotide that selectively
CC hybridizes to a sequence at least 80% identical to any of one of 80
CC nucleic acid sequences given in the specification. The method is useful
CC in diagnosing ovarian cancer and in identifying and using agents and/or
CC targets that inhibit ovarian cancer. The nucleic acid molecule,
CC polypeptide and the antibody may also be used in detecting ovarian
CC cancers, monitoring and early detection of relapse following treatment,
CC monitoring response to therapy, selecting patients for post-operative
CC chemotherapy or radiation therapy, in selecting mode of therapy,
CC determining tumour prognosis, early detection of pre-cancerous lesions,
CC and as vaccines. This sequence corresponds to one of the proteins used
CC for the detection method of the invention.
XX
XX
XX Sequence 431 AA;
XX
XX
XX Query Match 100.0%; Score 111; DB 7; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTOLNAIS 20
XX |||||||||||||||||||
XX 386 INPETHKPCCAPTOLNAIS 405
XX
XX
XX RESULT 182
XX AEM00788
XX ID AEM00788 standard; protein; 431 AA.
XX
XX AEM00788;
XX
XX 15-JAN-2004 (first entry)
XX
XX Human osteogenic protein (hOP)-1.
XX
XX Parkinson's disease; nerve-cell adhesion molecule; LI; DPP; Vg1; Vgr-1;
XX nigrostriatal pathway; morphogen; osteogenic protein; OP; 60A;
XX GDF-1; bone morphogenic protein; BMP; human.
XX
XX Homo sapiens.
```

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XX US2003109445-A1.
XX
XX 12-JUN-2003.
XX
XX
XX 16-OCT-2002; 2002US-00272503.
XX
XX 11-MAR-1991; 91US-00667274.
XX
XX 30-AUG-1991; 91US-00752764.
XX
XX 30-AUG-1991; 91US-00753059.
XX
XX 31-JUL-1992; 92US-00922813.
XX
XX 23-SEP-1993; 93US-00126100.
XX
XX 16-JUN-1994; 94US-00260675.
XX
XX 25-SEP-1997; 97US-00938622.
XX
XX (RUEG/) RUEGER D C.
XX (SAMP/) SAMPATH K T.
XX (COHE/) COHEN C M.
XX (OPPE/) OPPERMAN H.
XX (PANG/) PANG R H L.
XX
XX Rueger DC, Sampath KT, Cohen CM, Oppermann H, Pang RHL;
XX
XX WPI; 2003-801273/75.
XX
XX N-PSDB; AAD61577.
XX
XX
XX Treating Parkinsons disease comprises using a morphogen that stimulates
PT production of a nerve-cell adhesion molecule or LI by a specific cell in
PT vitro.
XX
XX
XX Claim 1; Page 27-28; 0pp; English.
XX
XX The invention relates to a method for treating Parkinson's disease which
CC involves using a morphogen that stimulates production of a nerve-cell
CC adhesion molecule or LI by a specific cell in vitro. The invention is
CC used to treat Parkinson's disease and to restore or preserve neural cell
CC function in a mammal afflicted with Parkinson's disease. It is used to
CC restore or maintain the integrity of the nigrostriatal pathway or to
CC prevent degeneration of the nigrostriatal pathway in a mammal afflicted
CC with Parkinson's disease. In the treatment method, morphogen may be
CC complexed with a prodomain polypeptide that is the pro-domain of
CC osteogenic protein (OP)-1, OP-2, 60A, GDF-1, bone morphogenic protein
CC (BMP)2A, BMP2B, DPP, Vg1, Vgr-1, BMP3, BMP5, or BMP-6. The present
CC sequence is the human OP-1 protein. This sequence is used to illustrate
CC the method of the invention.
XX
XX
XX Sequence 431 AA;
XX
XX
XX Query Match 100.0%; Score 111; DB 7; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 INPETHKPCCAPTOLNAIS 20
XX |||||||||||||||||||
XX 386 INPETHKPCCAPTOLNAIS 405
XX
XX
XX RESULT 183
XX ADI39797
XX ID ADI39797 standard; protein; 431 AA.
XX
XX ADI39797;
XX
XX 22-APR-2004 (first entry)
XX
XX Human osteogenic protein (OP)-1.
XX
XX Parkinson's disease; therapeutic; therapy; osteogenic protein-1; OP-1;
XX morphogen; motor coordination; tremor; rigidity; bradykinesia;
XX equilibrium deficit; posture deficit; neuronal cell survival; neuropathy;
XX nigrostriatal pathway; cell adhesion molecule; CAM; human.
XX
XX Homo sapiens.
```

Key	Location/Qualifiers
Region	330..431
	/note="Specifically claimed in Claim 1"
US6506729-B1.	
14-JAN-2003.	
25-SEP-1997;	97US-00938622.
08-MAR-1991;	91US-00667274.
30-AUG-1991;	91US-00752766.
30-AUG-1991;	91US-00753059.
31-JUL-1992;	92US-00922813.
23-SEP-1993;	92US-00126100.
16-JUN-1994;	94US-00260675.
(CUR1-) CURIS INC.	
Rueger DC, Sampath KT, Cohen CM, Oppermann H, Pang RHL;	
WPI: 2003-584258/55.	
N-PSDB; ADI39796.	
Treatment of mammal with symptoms of Parkinson's disease by administering	
soluble human OP-1 polypeptide morphogen containing amino acid sequence	
to site of neuronal damage or neuropathy.	
Claim 1; SEQ ID NO 2; 44pp; English.	
The present invention relates to therapeutic methods and compositions for	
treating Parkinson's disease including methods of enhancing the survival	
of neural cells. A mammal with symptoms of Parkinson's disease is treated	
by administering a soluble human osteogenic protein (OP)-1 morphogen to	
the site of neuronal damage or neuropathy in the mammal. The invention is	
useful for treating a mammal with symptoms of Parkinson's disease	
consisting of motor coordination, tremor, rigidity, bradykinesia or	
deficits in equilibrium and posture, to restore motor function. The	
invention maintains neural pathways in a mammal, including enhancing the	
survival of neurons at the risk of dying, inducing the cellular repair of	
damaged neurons and neural pathways and stimulating the neurons to	
maintain their differentiated phenotype. It stimulates the expression of	
cell adhesion molecule (CAM) in neurons and enhances neuronal cell	
survival. It also provides means for evaluating the status of nerve	
tissue, including means for detecting and monitoring neuropathies in a	
mammal. It also prevents degeneration of the nigrostriatal pathway or	
loss of functional activity associated with this pathway. The present	
sequence is human osteogenic protein-1.	
Sequence 431 AA:	
Query Match	100.0%; Score 111; DB 7; Length 431;
Best Local Similarity	100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0	
1 INPETYKPCCAPTQNAIS 20	
386 INPETYKPCCAPTQNAIS 405	
RESULT 184	
ADJ62677	
ID ADJ62677 standard; protein; 431 AA.	
AC ADJ62677;	
DT 06-MAY-2004 (first entry)	
DE Human osteogenic protein 1, OP1.	
human; osteogenic protein 1, OP1; osteogenic device;	
endochondral bone formation; bone repair; cartilage repair;	

XX vascularisation; mineralisation; bone marrow differentiation.  
XX  
XX Homo sapiens.  
XX  
XX US6551995-B1.  
XX  
XX 22-APR-2003.  
XX  
XX 04-SEP-1998; 98US-00148925.  
XX  
XX 08-APR-1988; 88US-00179406.  
XX 15-AUG-1988; 88US-00232630.  
XX 23-FEB-1989; 89US-00315342.  
XX 17-OCT-1989; 89US-00422613.  
XX 17-OCT-1989; 89US-00422623.  
XX 17-OCT-1989; 89US-00422639.  
XX 22-FEB-1990; 90US-00483913.  
XX 20-AUG-1990; 90US-00569920.  
XX 07-SEP-1990; 90US-00579865.  
XX 18-OCT-1990; 90US-00599543.  
XX 18-OCT-1990; 90US-00600024.  
XX 21-NOV-1990; 90US-00616374.  
XX 04-DEC-1990; 90US-00621849.  
XX 04-DEC-1990; 90US-00621988.  
XX 22-FEB-1991; 91US-00660162.  
XX 20-DEC-1991; 91US-00810560.  
XX 28-JAN-1992; 92US-00827052.  
XX 21-FEB-1992; 92US-00841646.  
XX 01-NOV-1993; 93US-00147023.  
XX 24-MAY-1995; 95US-00445639.  
XX  
XX (STYC ) STRYKER CORP.  
XX  
XX Oppermann H, Ozkaynak E, Kuberasampath T, Rueger DC, Pang RHL,  
XX  
XX WPI: 2003-575998/54.  
XX  
XX DR N-PSDB; ADJ62676, ADJ62678.  
XX  
XX  
XX Osteogenic device useful for inducing endochondral bone formation in  
XX mammals, comprises ceramic or biodegradable non-collagen polymer matrix  
XX containing substantially pure natural-sourced mammalian osteogenic  
XX protein.  
XX  
XX  
XX PS Disclosure; SEQ ID NO 2; 127pp; English.  
XX  
XX  
XX The invention relates to an osteogenic device for implantation in a  
XX mammal, comprising a ceramic or biodegradable non-collagen polymer matrix  
XX defining pores of a dimension sufficient to permit influx,  
XX differentiation and proliferation of migratory progenitor cells from the  
XX body of mammal, and a substantially pure osteogenic protein competent to  
XX induce endochondral bone formation when disposed in the matrix and  
XX implanted in mammal. The device is useful for producing endochondral bone  
XX formation in mammals, for bone and cartilage repair, for inducing the  
XX full developmental cascade of endochondral bone formation including  
XX vascularisation, mineralisation and bone marrow differentiation at the  
XX locus of an implant when implanted in a mammalian body. The device is  
XX useful for bone formation in various orthopedic, periodontal and  
XX reconstructive procedures. The present sequence represents the amino acid  
XX sequence of the human osteogenic protein 1, OPl.  
XX  
XX  
XX SQ Sequence 431 AA;  
XX  
XX Query Match 100.0%; Score 111; DB 7; Length 431;  
XX Best Local Similarity 100.0%; Prd. No. 1.8e-06;  
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0.  
XX  
XX QY 1 INPETYKPCAPQTQNAIS 20  
XX |||  
XX Db 386 INPETYKPCAPQTQNAIS 405  
XX  
XX  
XX RESULT 195  
XX DDN39200

ID ADN39200 standard; protein; 431 AA.  
XX  
AC ADN39200;  
DT 17-JUN-2004 (first entry)  
XX  
DE Cancer/angiogenesis/fibrosis-related polypeptide, SEQ ID NO:518.  
XX  
KM Human; differential expression; cancer; angiogenic disorder;  
KM fibrotic disorder; psoriasis; ischaemia; heart disease; atherosclerosis;  
KM inflammatory disease; autoimmune disease;  
KM retinal neovascularization syndrome; scarring; uterine fibroid;  
KM detection; diagnosis; prognosis; drug screening; drug targeting;  
KM wound healing; contraception; cytostatic; cardiant; immunomodulatory;  
KM vulnery; gene therapy; vaccine.  
XX  
OS Homo sapiens.  
XX  
PN WO2003042661-A2.  
XX  
PD 22-MAY-2003.  
XX  
PF 13-NOV-2002; 2002WO-US036810.  
XX  
PR 13-NOV-2001; 2001US-0350666P.  
PR 21-NOV-2001; 2001US-0332464P.  
PR 29-NOV-2001; 2001US-0343939P.  
PR 03-DEC-2001; 2001US-0353949P.  
PR 14-DEC-2001; 2001US-0340376P.  
PR 08-JAN-2002; 2002US-0347211P.  
PR 10-JAN-2002; 2002US-0347349P.  
PR 08-FEB-2002; 2002US-0355250P.  
PR 13-FEB-2002; 2002US-0356714P.  
PR 20-FEB-2002; 2002US-0359077P.  
PR 29-MAR-2002; 2002US-0368099P.  
PR 04-APR-2002; 2002US-0370110P.  
PR 12-APR-2002; 2002US-0372246P.  
PR 05-JUN-2002; 2002US-0386614P.  
PR 16-JUL-2002; 2002US-0386839P.  
PR 22-JUL-2002; 2002US-0387755P.  
PR 22-JUL-2002; 2002US-0387845P.  
PR 09-SEP-2002; 2002US-0409450P.  
XX  
PA (EOSB-) EOS BIOTECHNOLOGY INC.  
XX  
PI Afaer D, Aziz N, Ginsburg WM, Gish KC, Glynn R, Hevezi PA;  
PI Mack DH, Murray R, Watson SR, Wilson KE, Zlotnik A;  
XX  
XX WPI; 2003-468649/44.  
XX  
DR N-PSDB; ADN39199.  
XX  
DT Determining the presence or absence of a pathological cell in a patient;  
PT useful for diagnosing, prognosing or treating cancer, comprises detecting  
PT a nucleic acid in a biological sample.  
XX  
PS Claim 12; SEQ ID NO 518; 1385pp; English.  
XX

CC sequence represents a polypeptide of the invention.  
XX  
SQ Sequence 431 AA;  
XX

Query Match 100.0%; Score 111; DB 7; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQLNALS 20  
DB 386 INPETHKPCAPQLNALS 405

RESULT 186  
ADN39469  
ID ADN39469 standard; protein; 431 AA.  
XX  
AC ADN39469;  
XX  
DT 17-JUN-2004 (first entry)  
XX

DE Cancer/angiogenesis/fibrosis-related polypeptide, SEQ ID NO:469.  
XX

KM Human; differential expression; cancer; angiogenic disorder;  
KM fibrotic disorder; psoriasis; ischaemia; heart disease; atherosclerosis;  
KM inflammatory disease; autoimmune disease;  
KM retinal neovascularization syndrome; scarring; uterine fibroid;  
KM detection; diagnosis; prognosis; drug screening; drug targeting;  
KM wound healing; contraception; cytostatic; cardiant; immunomodulatory;  
KM vulnery; gene therapy; vaccine.  
XX  
OS Homo sapiens.  
XX  
PN WO2003042661-A2.  
XX  
PD 22-MAY-2003.  
XX  
PF 13-NOV-2002; 2002WO-US036810.  
XX

PR 13-NOV-2001; 2001US-0350666P.  
PR 21-NOV-2001; 2001US-0332464P.  
PR 29-NOV-2001; 2001US-0343939P.  
PR 03-DEC-2001; 2001US-0353949P.  
PR 14-DEC-2001; 2001US-0340376P.  
PR 08-JAN-2002; 2002US-0347211P.  
PR 10-JAN-2002; 2002US-0347349P.  
PR 08-FEB-2002; 2002US-0355250P.  
PR 13-FEB-2002; 2002US-0356714P.  
PR 20-FEB-2002; 2002US-0359077P.  
PR 29-MAR-2002; 2002US-0368099P.  
PR 04-APR-2002; 2002US-0370110P.  
PR 12-APR-2002; 2002US-0372246P.  
PR 05-JUN-2002; 2002US-0386614P.  
PR 16-JUL-2002; 2002US-0386839P.  
PR 22-JUL-2002; 2002US-0387755P.  
PR 22-JUL-2002; 2002US-0387845P.  
PR 09-SEP-2002; 2002US-0409450P.  
XX

PA (EOSB-) EOS BIOTECHNOLOGY INC.  
XX

PI Afaer D, Aziz N, Ginsburg WM, Gish KC, Glynn R, Hevezi PA;  
PI Mack DH, Murray R, Watson SR, Wilson KE, Zlotnik A;  
XX  
XX WPI; 2003-468649/44.  
XX  
DR N-PSDB; ADN39468.  
XX

DT Determining the presence or absence of a pathological cell in a patient;  
PT useful for diagnosing, prognosing or treating cancer, comprises detecting  
PT a nucleic acid in a biological sample.  
XX  
PS Claim 12; SEQ ID NO 469; 1385pp; English.  
XX

CC The invention relates to nucleic acids and proteins (ADN38683-ADN40064)



PR 14-DEC-2001; 2001US-0340376P.  
 PR 08-JAN-2002; 2002US-0347211P.  
 PR 10-JAN-2002; 2002US-0347349P.  
 PR 08-FEB-2002; 2002US-0355250P.  
 PR 13-FEB-2002; 2002US-0356714P.  
 PR 20-FEB-2002; 2002US-0359077P.  
 PR 29-MAR-2002; 2002US-0368809P.  
 PR 04-APR-2002; 2002US-0370110P.  
 PR 12-APR-2002; 2002US-0372246P.  
 PR 05-JUN-2002; 2002US-0386614P.  
 PR 16-JUL-2002; 2002US-0396839P.  
 PR 22-JUL-2002; 2002US-0397775P.  
 PR 22-JUL-2002; 2002US-0397845P.  
 PR 09-SEP-2002; 2002US-0409450P.  
 XX (EOSP-) EOS BIOTECHNOLOGY INC.  
 XX Afar D, Aziz N, Ginsburg WM, Gish KC, Glynn R, Hevezi PA,  
 PI Mack DH, Murray R, Watson SR, Wilson KE, Zlotnick A;  
 XX N-PSDB; ADN39524.  
 DR WPI: 2003-468649/44.  
 XX PT Determining the presence or absence of a pathological cell in a patient,  
 PT useful for diagnosing, prognosing or treating cancer, comprises detecting  
 PT a nucleic acid in a biological sample.  
 XX  
 PS Claim 12; SEQ ID NO A125; 1385BP; English.  
 CC The invention relates to nucleic acids and proteins (ADN38683-ADN40064)  
 CC whose expression is upregulated or downregulated in specific cancers or  
 CC other diseases such as angiotensin or fibrotic disorders, and to methods  
 CC of determining the presence or absence of a pathological cell in a  
 CC patient by detecting a nucleic acid at least 80% identical to those of  
 CC the invention or by detecting a polypeptide of the invention. The  
 CC invention also relates to expression vectors and host cells comprising a  
 CC nucleic acid of the invention; antibodies which specifically bind a  
 CC polypeptide of the invention; use of such antibodies for drug targeting;  
 CC and methods of screening for modulators of activity or expression of the  
 CC polypeptides and nucleic acids. The nucleic acids, polypeptides,  
 CC antibodies and methods are useful for diagnosis, prognosing and treating  
 CC cancer and other conditions such as psoriasis, ischemia, heart disease,  
 CC atherosclerosis, inflammatory diseases, autoimmune diseases, retinal  
 CC neovascularization syndromes, scarring and uterine fibroids. They may  
 CC also be useful in wound healing and in contraception. The present  
 CC sequence represents a polypeptide of the invention.  
 CC  
 SO Sequence 431 AA:  
 QY  
 Best Local Similarity 100.0%; Score 111; DB 7; Length 431;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 DB 1 INPETHKPCCAPQTOLNAIS 20  
 386 INPETHKPCCAPQTOLNAIS 405  
 RESULT 189  
 ADE52748  
 ID ADE52748 standard; protein, 431 AA.  
 XX  
 AC ADE52748;  
 XX  
 DT 29-JAN-2004 (first entry)  
 XX  
 DE Human osteogenic protein, OP1.  
 XX Human osteogenic protein; OP1; CBMP2A; CBMP2B; osteogenic device;  
 KW endochondral bone formation; cartilage formation; non-union fracture;  
 KW cartilage repair; dental reconstructive procedure.  
 XX Homo sapiens.  
 OS

XX Key Location/Qualifiers  
 PH 293..431  
 FT Region  
 FT /note="This region is claimed in claim 30"  
 FT /note=.431  
 FT Region  
 FT /note="This region is claimed in claim 29"  
 FT /note=.431  
 FT Region  
 FT /note="This region is claimed in claim 28"  
 FT /note=.431  
 FT Region  
 FT /note="This region is claimed in claim 27"  
 FT /note=.431  
 FT Region  
 FT /note="This region is claimed in claim 26"  
 FT /note=.431  
 FT Region  
 FT /note="This region is claimed in claim 25"  
 FT /note=.431  
 FT Region  
 FT /note="This region is claimed in claim 24"  
 FT /note=.431  
 FT Region  
 FT /note="This region is claimed in claim 23"  
 PN US2003069401-A1.  
 XX 10-APR-2003.  
 PD 97US-00957425.  
 XX 24-OCT-1997;  
 XX 08-APR-1988;  
 XX 88US-00179406.  
 XX 15-AUG-1988;  
 XX 88US-00232630.  
 XX 23-FEB-1989;  
 XX 89US-00153432.  
 XX 17-OCT-1989;  
 XX 89US-00422613.  
 XX 17-OCT-1989;  
 XX 89US-00422699.  
 XX 22-FEB-1990;  
 XX 90US-00483913.  
 XX 20-AUG-1990;  
 XX 90US-00569220.  
 XX 18-OCT-1990;  
 XX 90US-00589543.  
 XX 18-OCT-1990;  
 XX 90US-00600024.  
 XX 21-NOV-1990;  
 XX 90US-00616374.  
 XX 04-DEC-1990;  
 XX 90US-00621849.  
 XX 04-DEC-1990;  
 XX 90US-00621988.  
 XX 22-FEB-1991;  
 XX 91US-00660162.  
 XX 20-DEC-1991;  
 XX 91US-00810560.  
 XX 28-JAN-1992;  
 XX 92US-00827052.  
 XX 21-FEB-1992;  
 XX 92US-00841646.  
 XX 22-DEC-1992;  
 XX 92US-00955345.  
 XX 01-NOV-1993;  
 XX 93US-00147023.  
 XX 23-MAY-1995;  
 XX 95US-00447570.  
 XX (OPPE/) OPPERMAN H.  
 XX (OZKA/) OZKAYNAK E.  
 XX (KUBE/) KUBERASAMPATH T.  
 XX (RUEG/) RUEGER D C.  
 XX (PANG/) PANG R H L.  
 PI Opermann H, Ozkaynak E, Kuberassampath T, Rueger DC, Pang RHL;  
 DR WPI: 2004-008898/01.  
 DR P-PSDB; ADE52747.  
 XX  
 PT Osteogenic device for inducing endochondral bone formation, has  
 PT osteogenic protein comprising a pair of unglycosylated protein chains  
 PT disulfide bonded to produce dimeric species, dispersed within  
 PT biocompatible matrix.  
 XX  
 PS Disclosure; SEQ ID NO 2; 130BP; English.  
 XX  
 CC The invention relates to an osteogenic device for implantation in a  
 CC mammal, comprising osteogenic protein (OP) dispersed within a  
 CC biocompatible, in vivo biodegradable matrix, where OP comprises a pair  
 CC (P) of unglycosylated protein chains disulfide bonded to produce dimeric  
 CC species having a conformation in mammal when disposed of inducing  
 CC endochondral bone formation in mammal when disposed in the matrix and  
 CC accessible to the cells. Also included are substantially a pure mammalian  
 CC osteogenic protein (comprising a pair of unglycosylated polypeptide  
 CC chains and capable of inducing endochondral bone formation in association  
 CC with a matrix when implanted in a mammal, where the osteogenic protein

comprises peptides derived from human or mouse OPI), a DNA sequence encoding a protein capable of inducing endochondral bone formation in a mammal, a vector comprising the DNA, a host cell harbouring and capable of expressing (DNA or vector), an osteogenic protein as defined above expressed from recombinant DNA in a host cell, a polypeptide chain useful as a subunit of a dimeric osteogenic protein and an antibody (Ab) capable of binding specifically to an epitope on the osteogenic proteins. The osteogenic device is useful for inducing local cartilage and bone formation, for endochondral bone formation in a mammal, for inducing cartilage or endochondral bone formation in a mammal, or for inducing endochondral bone formation in a non-union fracture in a mammal. The osteogenic device is useful for cartilage repair in a mammal, in periodontal or dental reconstructive procedures, or in endochondral bone reconstructive procedures. The antibody is useful for selectively extracting osteogenic protein from a mixture of molecules. The host cell is useful for producing a protein by recombinant gene expression. The osteogenic proteins are useful to raise monoclonal are polyclonal antibodies capable of specifically binding to an epitope of the osteogenic protein. The present sequence represents a human osteogenic protein, fragments of which are used in osteogenic device of the invention. Note: The claims refer to regions of mouse and human osteogenic proteins which are functional in the osteogenic device, however the authors refer to a DNA SEQ ID number where they really mean to refer to a protein.

SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
DB 386 INPETHKPCCAPTQNLNALS 405  
|||||

RESULT 190  
ADH11584  
ID ADH11584 standard; protein; 431 AA.

XX AC ADH11584;  
XX DT 11-MAR-2004 (first entry)  
XX DE Human bone morphogenic protein (BMP) polypeptide #12.  
KM Human; bone morphogenic protein; BMP; weight gain; appetite suppression;  
KM fat mass reduction; cell sensitivity; glucose uptake; diabetes;  
KM insulin resistance; hyperglycaemia; hypertension;  
KM coronary artery disease; renal failure; neuropathy; metabolic disorder;  
KM glucose metabolism disorder; endocrine disorder; obesity; weight loss;  
KM liver disorder; cartilage growth disorder; bone growth disorder;  
KM inflammation; aberrant cell growth; liver cancer.  
XX OS Homo sapiens.  
XX PN US2003224501-A1.  
XX PD 04-DEC-2003.  
XX PF 14-FEB-2003; 2003US-00366345.  
XX PR 17-MAR-2000; 2000US-0190067P.  
PR 16-MAR-2001; 2001US-00809229.  
PR 23-MAR-2001; 2001WO-US009229.  
PR 17-JAN-2002; 2002US-0348621P.  
PR 22-JAN-2002; 2002US-0349356P.  
PR 28-JAN-2002; 2002US-0351520P.  
PR 06-FEB-2002; 2002US-0354265P.  
PR 15-FEB-2002; 2002US-0356749P.  
PR 16-JAN-2003; 2003US-00345236.  
XX PA (YOUNG/) YOUNG P. B.

PA (RUBE/) RUBEN S. M.  
XX Young PB, Ruben SM;  
XX WPI; 2004-022075/02.  
XX DR N-PSDB; ADH11563.  
XX PT New bone morphogenic protein polypeptides and polynucleotides; useful for  
PT diagnosing, preventing, treating or ameliorating a medical condition,  
PT e.g. diabetes, dyslipidemia, hypertension, coronary artery disease or  
PT neuropathy.  
XX PS Claim 1; SEQ ID NO 39; 224pp; English.  
XX The invention relates to human bone morphogenic protein (BMP)  
XX polypeptides and the polynucleotides encoding them. The invention also  
XX relates to a method for limiting weight gain, suppressing appetite or  
XX reducing fat mass, comprising administering to a mammalian subject a  
XX therapeutic amount of a BMP polypeptide, and a method for increasing the  
XX sensitivity of a cell to insulin or increasing glucose uptake by a cell,  
XX comprising contacting the cell with a BMP polypeptide. The BMP  
XX polypeptides and polynucleotides are useful for diagnosing a pathological  
XX condition or a susceptibility to a pathological condition in a subject or  
XX for preventing, treating or ameliorating a medical condition, e.g.  
XX diabetes, insulin resistance, hyperglycaemia, hypertension, coronary  
XX artery disease, renal failure, neuropathy, metabolic disorders, glucose  
XX metabolism disorder, endocrine disorders, obesity, weight loss, liver  
XX disorders, cartilage and bone growth disorders, inflammation or aberrant  
XX cell growth such as liver cancer. The BMP polypeptides and  
XX polynucleotides are also useful for regulating nutritional partitioning,  
XX limiting weight gain, suppressing appetite, reducing fat mass, increasing  
XX the sensitivity of a cell to insulin or increasing glucose uptake by a  
XX cell. This sequence represents a human BMP polypeptide of the invention.  
XX SO Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTQNLNALS 20  
DB 386 INPETHKPCCAPTQNLNALS 405  
|||||

RESULT 191  
ADH17316  
ID ADH17316 standard; protein; 431 AA.

XX AC ADH17316;  
XX DT 11-MAR-2004 (first entry)  
XX DE Human NOVIC protein - SEQ ID 6.  
XX NOVIC; antidiabetic; anorectic; cardiant; hypotensive;  
XX antidiabetic; anorectic; virucide; antibacterial; fungicide;  
XX protozoacide; nootropic; neuroprotective; antiparkinsonian;  
XX anticonvulsant; osteopathic; antiarthritic; antiinflammatory;  
XX dermatological; antiaschemic; antilipemic; metabolic; diabetes;  
XX obesity; infection; anorexia; cancer; cardiovascular; hypertension;  
XX atherosclerosis; neurodegenerative; Alzheimer's disease; Parkinson's;  
XX epilepsy; immune; osteoarthritis; haemopoietic;  
XX inflammatory skin disorder; asthma; dyslipidemia; wound healing;  
XX cell differentiation; proliferation; haemopoiesis; neurogenesis;  
XX angiogenesis; gene therapy; chromosome mapping; tissue typing;  
XX pharmacogenomic; human.  
XX OS Homo sapiens.  
XX PN WO2003093432-A2.  
XX PD 13-NOV-2003.

XX 02-MAY-2003; 2003WO-US013690.  
 PF 02-MAY-2002; 2002US-0377321P.  
 XX 06-MAY-2002; 2002US-0378730P.  
 PR 24-MAY-2002; 2002US-0383075P.  
 PR 29-MAY-2002; 2002US-0384044P.  
 PR 30-MAY-2002; 2002US-0384215P.  
 PR 30-MAY-2002; 2002US-0384296P.  
 PR 30-MAY-2002; 2002US-0384377P.  
 PR 30-MAY-2002; 2002US-0384352P.  
 PR 31-MAY-2002; 2002US-0385211P.  
 PR 02-JUL-2002; 2002US-0393333P.  
 PR 09-AUG-2002; 2002US-0402154P.  
 PR 09-AUG-2002; 2002US-0402171P.  
 PR 09-AUG-2002; 2002US-0402204P.  
 PR 22-AUG-2002; 2002US-0405175P.  
 PR 27-AUG-2002; 2002US-0406129P.  
 PR 23-SEP-2002; 2002US-0412954P.  
 PR 30-SEP-2002; 2002US-0414975P.  
 PR 07-OCT-2002; 2002US-0416616P.  
 PR 24-OCT-2002; 2002US-0420851P.  
 PR 31-OCT-2002; 2002US-0422547P.  
 PR 01-MAY-2003; 2003US-00428275.

## (CURA-) CURAGEN CORP.

XX Alvarez E, Anderson DW, Boldog FL, Catterton E, Edinger SR,  
 PI Fernandes ER, Gerlach VL, Gorman L, Grosse WM, Guo X, Ji W,  
 PI Kephuda R, Li L, MacDougall JR, Padigaru M, Patnirajan M,  
 PI Peterson JD, Rastelli L, Shinkets RA, Spytek KA, Stone DJ,  
 PI Verneer CM, Voss EZ, Zhong M;  
 XX WPI; 2004-053040/05.  
 DR N-PSDB; ADH17315.

XX New isolated NOVX polypeptide, useful for preventing, diagnosing or  
 PT treating NOVX-associated disorders, e.g. osteoarthritis, obesity,  
 PT atherosclerosis, cancer, Parkinson's disease, asthma, or infections.

XX Claim 1; SEQ ID NO 6; 478pp; English.

XX The invention relates to a novel isolated NOVX polypeptide. The  
 CC polypeptide of the invention demonstrates antidiabetic, anorectic,  
 CC cardiact, hypotensive, antiarteriosclerotic, anorectic, vituicide,  
 CC antibacterial, fungicide, protozoacide, nootropic, neuroprotective,  
 CC antiiparkinsonian, anticonvulsant, osteopathic, antiarthritic,  
 CC antiinflammatory, dermatological, antiaesthetic and antidiabetic  
 CC activities. The polypeptides, nucleic acid molecules and antibodies may  
 CC be useful in the manufacture of a medicament for treating metabolic  
 CC disorders, diabetes, obesity, infectious diseases (viral, bacterial,  
 CC fungal, helminthic, and protozoal), anorexia, cancer, cardiovascular  
 CC diseases including hypertension and atherosclerosis, neurodegenerative  
 CC disorders, Alzheimer's disease, Parkinson's disease, epilepsy, immune  
 CC disorders such as osteoarthritis, haemopoietic disorders, inflammatory  
 CC skin disorders, asthma and various types of dyslipidaemia. The nucleic  
 CC acids and polypeptides may also be used as targets for the identification  
 CC of small molecules that modulate or inhibit neurogenesis, cell  
 CC differentiation, cell proliferation, haemopoiesis, wound healing and  
 CC angiogenesis, in gene therapy and the in generation of antibodies that  
 CC bind immunospecifically to NOVX substances for use in therapeutic or  
 CC diagnostic methods. The nucleic acids may be further used as  
 CC hybridisation probes, in chromosome mapping, tissue typing, preventive  
 CC medicine and pharmacogenomics. The current sequence is that of the human  
 CC NOVX protein of the invention.

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQUNAIS 20  
 DB 386 INPETHKPCCAPTQUNAIS 405

## RESULT 192

AD125169  
 ID AD125169 standard; protein; 431 AA.

XX AD125169;

DT 15-APR-2004 (first entry)

DE Human osteogenic protein, OP-1.

XX ligament defect; bone morphogenic protein; growth factor;

KW ligament cell-associated matrix; type I collagen; elastin; decorin;

KW aggrecan; OP-1; osteogenic protein-1; human.

XX Homo sapiens.

PN WO2004004663-A2.

XX 15-JAN-2004.

XX 09-JUL-2003; 2003WO-US021697.

XX 09-JUL-2002; 2002US-0395110P.

XX (STYC) STRYKER CORP.

PI Lee JC, Yeh LC;

XX WPI; 2004-132719/13.

DR N-PSDB; AD125178.

XX Treating ligament defects in patients, involves isolating ligament cells,  
 PT culturing ligament cells ex-vivo, recovering cultured ligament cells, and  
 PT implanting the recovered ligament cells into the patient.

XX Disclosure; SEQ ID NO 1; 95pp; English.

XX The invention relates to a novel method for treating a ligament defect in  
 CC a patient. The method involves administering to the patient an effective  
 CC amount of a bone morphogenic protein, transferring the cultured ligament  
 CC cells with a nucleic acid sequence encoding a bone morphogenic protein or  
 CC a growth factor; treating the cultured ligament cells with a bone  
 CC morphogenic protein; and culturing the ligament cell-associated matrix,  
 CC sufficient to allow formation of a ligament cell-associated matrix, where  
 CC the ligament cell-associated matrix is chosen from type I collagen,  
 CC elastin, decorin and aggrecan. The invention further includes a  
 CC composition comprising cultured ligament cells and a bone morphogenic  
 CC protein. The method of the invention is useful for treating (repairing,  
 CC regenerating, forming or promoting) a ligament defect in a patient. This  
 CC sequence represents a bone morphogenic protein of the invention.

XX Sequence 431 AA;

Query Match 100.0%; Score 111; DB 8; Length 431;  
 Best Local Similarity 100.0%; Pred. No. 1.8e-06;  
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQUNAIS 20

DB 386 INPETHKPCCAPTQUNAIS 405

## RESULT 193

ADM80486

ID ADM80486 standard; protein; 431 AA.

XX ADM80486;

AC ADM80486;

```

XX 03-JUN-2004 (first entry)
XX
XX Human osteogenic protein, OPL.
DE
XX human; osteogenic device; osteogenic protein, OPL; biocompatible matrix;
XX endochondral bone formation; non-union fracture; cartilage formation;
XX periodontal reconstructive procedure; dental reconstructive procedure;
XX cartilage repair.
XX
XX Homo sapiens.
XX
XX US200322496-A1.
XX
XX 04-DEC-2003.
XX
XX 17-DEC-2002; 2002US-00321799.
XX
XX 08-APR-1988; 88US-00173406.
XX 15-AUG-1988; 88US-00232630.
XX 28-JAN-1992; 92US-00827052.
XX 21-FEB-1992; 92US-00841646.
XX 01-NOV-1993; 93US-00147023.
XX 04-MAY-1995; 95US-00446999.
XX 04-SEP-1998; 98US-00148925.
XX
XX (STYC ) STRYKER CORP.
XX
XX Oppeerman H, Ozkaynak E, Kuberassampath T, Rueger DC, Pang RHL;
XX
XX WPI: 2004-167144/16.
XX
XX N-PSDB; ADM80485, ADM80487.
XX
XX Osteogenic device for implantation in mammal comprising osteogenic
XX protein dispersed within biocompatible matrix; osteogenic protein
XX comprising pair of unglycosylated protein chains, inducing endochondral
XX bone formation.
XX
XX Disclosure; SEQ ID NO 2, 136pp; English.
XX
XX The invention relates to an osteogenic device for implantation in mammal,
XX comprising osteogenic protein dispersed within biocompatible matrix
XX defining pores, differentiation, and proliferation of migratory
XX progenitor cells from body of mammal, improvement where osteogenic
XX protein comprises pair of unglycosylated protein chains disulfide bonded
XX to produce dimeric species capable of inducing endochondral bone
XX formation. The device is useful for inducing endochondral bone formation
XX in a non-union fracture in a mammal, for inducing cartilage or
XX reconstructive procedures, for use in cartilage repair in a mammal, for
XX use in endochondral bone reconstructive procedures. The device is useful
XX for inducing cartilage or endochondral bone formation in a mammal
XX comprising the step of implanting the mammal at a locus accessible to
XX progenitor cells. The device is useful for inducing local
XX cartilage bone formation and endochondral bone formation in a non-union
XX fracture in a mammal. The antibody capable of binding specifically to the
XX osteogenic protein is useful for selectively extracting osteogenic
XX protein from a mixture of molecules. The present sequence represents the
XX amino acid sequence of the human osteogenic protein, OPL.
XX
XX
XX Sequence 431 AA.
XX
XX
XX Query Match 100.0%; Score 111; DB 8; Length 431;
XX Best Local Similarity 100.0%; Pred. No. 1.8e-06;
XX Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0
XX
XX 1 INPETHKPCCAPTOLNAIS 20
XX |||
XX Db 386 INPETHKPCCAPTOLNAIS 405

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ID	ADK90628 standard; protein; 431 AA.
AC	ADK90628;
XX	
DT	03-JUN-2004 (first entry)
DE	Human osteogenic protein 1 morphogen SegID 3.
XX	
KW	human; chronic renal failure; renal disorder; osteogenic protein; OP;
KW	bone morphogenetic protein; BMP; morphogen;
KW	angiotensin-converting enzyme inhibitor; ACE;
KW	angiotensin II receptor antagonist; AlIRa; end-stage renal disease; ESRD;
KW	chronic diabetic nephropathy; diabetic glomerulopathy;
KW	diabetic renal hypertrophy; hypertensive nephrosclerosis;
KW	hypertensive glomerulosclerosis; chronic glomerulonephritis;
KW	hereditary nephritis; renal dysplasia; antidiabetic; nephrotropic;
KW	antiinflammatory; vasotropic.
XX	
OS	Homo sapiens.
PN	WO2004019876-A2.
PD	11-MAR-2004.
XX	
PR	28-AUG-2003; 2003WO-US026923.
PF	28-AUG-2002; 2002US-0406431P.
XX	
XX	(CURT-) CURIS INC.
PA	(UNITW) UNIV WASHINGTON.
P1	Charette MF, Hruska KA, McCartney J;
XX	
DR	WPI; 2004-282635/26.
XX	N-PSDB; ADK90642.
PT	Treating or preventing chronic renal failure in mammal, comprises
PT	conjointly administering osteogenic proteins/bone morphogenetic proteins
PT	morphogen and angiotensin-converting enzyme inhibitor to mammal.
PS	Claim 60; SEQ ID NO 3; 365pp; English.
XX	
CC	This invention relates to a novel method for treating or preventing
CC	chronic renal failure and other associated mammalian renal disorders.
CC	Specifically, it refers to conjointly administering osteogenic protein
CC	(OP) or bone morphogenetic protein (BMP) morphogens with an angiotensin-
CC	converting enzyme (ACE) inhibitor, in particular the angiotensin II
CC	receptor antagonist/ blocker (AlIRa). The present invention describes
CC	using these compositions as inducers of proliferation and differentiation
CC	of renal tissue, and as such can be used to prevent, inhibit, delay or
CC	alleviate the progressive loss of renal function and the decline in
CC	glomerular filtration rate (GFR) characterised by chronic renal failure.
CC	Furthermore, they can be useful for treating conditions such as end-stage
CC	renal disease (ESRD), chronic diabetic nephropathy, diabetic
CC	glomerulopathy, diabetic renal hypertrophy, hypertensive nephrosclerosis,
CC	hypertensive glomerulosclerosis, chronic glomerulonephritis, hereditary
CC	nephritis and renal dysplasia where the mammal is a kidney transplant
CC	recipient. Accordingly, compositions exhibit antidiabetic, nephrotropic,
CC	antiinflammatory and vasotropic activities. This polypeptide sequence is
CC	a human osteogenic protein 1 of the invention.
XX	
SO	Sequence 431 AA;
Query Match	100.0%; Score 111; DB 8; Length 431;
Best Local Similarity	100.0%; Pred. No. 1,8e-06;
Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
OY	1 INBETVPRKCCAPPTOLNAIS 20
Db	386 INBETVPRKCCAPPTOLNAIS 405



ID	Accession	Title	Score	DB	Length
AD32623	AD32623	standard; protein; 431 AA.			
XX	AD32623				
XX	AD32623				
DT	17-JUN-2004	(first entry)			
XX					
DE	Prepro form of Human BMP-7.				
XX					
KW	human; bone morphogenic protein; BMP-2; metal alloy;				
KW	osteoprogenitor; osteo-integration; bone formation; trauma;				
KW	malalignment; dental defect; hip; elbow; spine; knee; finger; ankle;				
KW	inflammation; immunogenicity; transformation; mesenchymal stem cell;				
KW	osteoblast.				
XX					
OS	Homo sapiens.				
XX					
FT	Key	Location/Qualifiers			
FT	Peptide	1..29			
FT	Peptide	/label=Signal peptide			
FT	Peptide	30..292			
FT	Protein	/label=Propeptide			
FT		293..431			
FT		/label=hBMP7			
XX					
FN	WO2004024199-A1.				
PD	25-MAR-2004.				
XX					
PR	09-JUL-2003; 2003WO-EP007439.				
XX					
PR	10-SEP-2002; 2002EP-00020403.				
XX					
PA	(SCIL-) SCIL TECHNOLOGY GMBH.				
PI	Hellerbrand K, Beaucamp N, Kohnert U;				
DR	WPI; 2004-294993/27.				
XX					
PT	Production of devices useful for e.g. new bone formation in dental				
PT	defects, involves coating carrier having metal or metal alloy surface				
PT	with osteo-inductive protein solution and drying under reduced oxygen				
PT	concentration.				
XX					
PS	Disclosure; Page 15; 68pp; English.				
XX					
CC	This sequence represents the prepro form of human bone morphogenic				
CC	protein (BMP-7). This protein was used in the production of a device (D1)				
CC	which involves contacting a solution (A) with a carrier (B) having a				
CC	surface of metal or metal alloy to coat the surface with (B), and drying				
CC	of the coated carrier. (A) comprises an osteoinductive protein. The				
CC	process is carried out under a reduced concentration of oxygen				
CC	(preferably less than 10 vol.%). The device may be used in the				
CC	preparation of a pharmaceutical composition for osteo-integration and new				
CC	bone formation in treatment of e.g. traumatic, malignant, artificial or				
CC	dental defects, or for the treatment of hip, elbow, spine, knee, finger				
CC	or ankle joint. The method eliminates undesirable side effects such as				
CC	inflammation due to the enhanced immunogenicity of oxidized proteins; is				
CC	less time-consuming and economical. The device manufactured by the				
CC	present method is free of toxic substances. The device with the coating				
CC	of osteo-inductive protein distributes the protein evenly and efficiently				
CC	; initiates and stimulates the transformation of mesenchymal stem cells				
CC	into osteoblasts, hence accelerates the bone formation.				
XX					
SQ	Sequence 431 AA;				
QY	Query Match	100.0%; Score 111, DB 8, Length 431;			
DB	Best Local Similarity	100.0%; Pred. No. 1,8e-06;			
	Matches	20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;			
	1 INPETHKPCAPTOLNALS 20				
	386 INPETHKPCAPTOLNALS 405				

[illegible]

DE Human dedifferentiation factor BMP-7, SEQ ID NO:28.

KW Dedifferentiation; mammalian cell; tissue regeneration; epimorphosis;  
KW G1 Cdk complex; drug screening; cardiovascular disease; atherosclerosis;  
KW coronary artery disease; obstructive vascular disease;  
KW myocardial infarction; cancer; joint disease; rheumatoid arthritis;  
KW osteoarthritis; osteoporosis; eye disorders; cataract;  
KW retinal degeneration; macular degeneration; ear degeneration;  
KW hearing loss; lung disorder; chronic obstructive pulmonary disease;  
KW cystic fibrosis; emphysema; metabolic disorder; diabetes;  
KW genetic urinary disorder; renal failure; neurological disorder; dementia  
KW Alzheimer's disease; endocrine disorder; hypothyroidism; vasotropic;  
KW arteriosclerotic; cytostatic; osteopathic; antiarrhythmic; antineoplastic;  
KW ophthalmological; auditory; respiratory; antibacterial; neurotropic;  
KW neoptopic; neuroprotective; cell therapy; dedifferentiation factor;  
KW bone morphogenetic protein; BMP-7; human.

XX Homo sapiens.  
OS  
XX  
XX WO2004047747-A2.  
PN  
XX  
PD 10-JUN-2004.  
PP  
XX 21-NOV-2003; 2003WO-US037355.  
PF  
XX 22-NOV-2002; 2002US-00302812.  
PR  
XX (UTAH ) UNIV UTAH RES FOUND.  
PA  
XX  
XX Keating MT, Odeberg SJ, Poss KD;  
PI  
XX WPI; 2004441072/41.  
XX N-PSDB; ADOA9072.  
DR  
PT Dedifferentiating a differentiated mammalian cell comprises administering  
PT an agent that increases G1 Cdk complex or cell marker expression,  
PT promotes cell cycle reentry, or decreases differentiation marker  
PT expression.

XX  
XX  
XX Disclosure; SEQ ID NO 28; 301pp; English.

The invention relates to a method of dedifferentiating a differentiated mammalian cell. The method comprises administering one or more agents which (a) increases the expression and/or activity of a G1 Cdk complex; (b) decreases expression of one or more markers of differentiation; (c) promotes cell cycle reentry; or (d) increases the expression of one or more progenitor or stem cell markers. The invention also relates to a method of screening for dedifferentiation agents; the dedifferentiation agents identified and pharmaceutical compositions containing them; and a method of regenerating mammalian tissues and/or organs by dedifferentiating mammalian cells so that they become capable of redifferentiating to regenerate the tissue and/or organ. A variety of dedifferentiation factors may be used in the methods of the invention. These include extracts from animals (especially newts) that are capable of regenerating organs or tissues; growth factors, such as members of the fibroblast growth factor (FGF) family of proteins; activated fibroblast growth factor receptors (FGFRs); bone morphogenetic proteins (BMPs); Wnt family members; and other proteins that promote Wnt signaling such as beta-catenin and Lefty/Rcf; the intracellular factors Msx1 and Msx2; cyclind1; cyclin-dependent kinase 4 (Cdk4); agents which promote FGF, BMPR and Wnt signaling; and inhibitors of Msx3, GSK3-beta, p16, p21 or p27 expression or activity. The methods and compositions of the invention may be used for dedifferentiating mammalian cells in vivo and in vitro. The dedifferentiated cells can then be redifferentiated to regenerate desired tissues and/or organs. Tissue regeneration is useful in the treatment of cardiovascular diseases (e.g., atherosclerosis, coronary artery disease, obstructive vascular disease, or myocardial infarction); cancers and cancer-related conditions; joint diseases (e.g., Rheumatoid arthritis, osteoarthritis, or osteoporosis); eye-related degeneration (e.g., cataracts, retinal and macular degeneration); ear-related degeneration (e.g., hearing loss); lung disorders (e.g., chronic obstructive pulmonary disease), cystic fibrosis or emphysema); metabolic disorders (e.g., diabetes); genetic urinary disorders (e.g., renal failure); neurological disorders (e.g., hearing loss).

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CC disorders (e.g., dementia or Alzheimer's disease); and endocrine
CC disorders (e.g., hypothyroidism). With the exception of liver tissue,
CC mammals are incapable of regenerating a tissue or organ following injury
CC (a process known as epimorphosis, which occurs in animals such as newts,
CC axolotls and teleost fish); instead, the missing tissue is replaced with
CC non-functional scar tissue. The methods of the invention provide a means
CC in which missing or damaged tissue can be replaced with functional
CC tissue. The present sequence represents a protein which acts as a
CC differentiation factor.
CC
SQ Sequence 431 AA;
Query Match 100.0%; Score 111; DB 8; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.8e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 INPETYKPCCAPTQLNLAIS 20
|||||
Db 386 INPETYKPCCAPTQLNLAIS 405
RESULT 198
ABB07965
ID ABB07965 standard; protein; 473 AA.
XX ABB07965;
AC
XX 12-AUG-2002 (first entry)
DT
XX Human fibronectin collagen-binding domain/BMP7 hybrid protein.
DE
XX Osteogenesis; drug delivery system; DDS; collagen; osteopathic; human;
XX fibronectin; BMP7; hybrid; fusion protein.
KM
XX Homo sapiens.
OS
XX Synthetic.
XX JP2002058485-A.
XX
XX 26-FEB-2002.
PD
XX 16-AUG-2000; 2000JP-00246744.
PF
XX 16-AUG-2000; 2000JP-00246744.
PR
XX (TERU ) TERUMO CORP.
PA
XX WPI; 2002-438612/47.
XX N-PSDB; ABL41028.
DR
XX
XX Novel osteogenesis stimulating fused protein having collagen avidity used
XX as an osteogenesis stimulator and a localizing agent.
PT
XX
XX Disclosure; Page 26-28; 30pp; Japanese.
XX
XX The invention provides an osteogenesis stimulating fused protein (I) for
XX a drug delivery system (DDS) of osteogenic factor, having collagen
XX avidity and polypeptides homologous to collagen avidity domain or its
XX modified peptides. (I) is used for stimulation of osteogenesis, a
XX localizing agent and a slow releasing agent for a drug delivery system.
XX The present sequence represents a human fibronectin collagen-binding
XX domain/human BMP7 hybrid protein
XX
SQ Sequence 473 AA;
Query Match 100.0%; Score 111; DB 5; Length 473;
Best Local Similarity 100.0%; Pred. No. 2e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 INPETYKPCCAPTQLNLAIS 20
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Db 428 INPETYKPCCAPTQLNLAIS 447

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RESULT 199  
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 ID AAR44751 standard; protein; 484 AA.  
 XX  
 XX AAR44751;  
 AC  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 06-JUN-1994 (first entry)  
 XX  
 DE Osteogenic fusion protein OPIC.  
 XX  
 KW Osteogenic protein; bone; cartilage; matrix; osteoarthritis; repair;  
 KW vascularisation; mineralisation; differentiation.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Region 1..53  
 FT /label= Leader sequence.  
 FT Region 61..316  
 FT /note= "Prepro form of Op1."  
 XX  
 OS US5266683-A.  
 PN  
 XX  
 PD 30-NOV-1993.  
 XX  
 PF 21-FEB-1992; 92US-00841646.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 XX  
 PA (STYC ) STRYKER CORP.  
 PI Kubersampath T, Ozkaynak E, Rueger DC, Pang RHL, Oppermann H;  
 XX  
 DR WPI; 1993-395405/49.  
 DR N-PSDB; AAQ53147.  
 XX  
 PT New pure mammalian osteogenic proteins - induce cartilage and  
 PT endochondral bone formation when in association with a matrix.  
 XX  
 PS Disclosure; Col 105-110; 128pp; English.  
 XX  
 CC The fusion protein encodes the entire prepro form of Op1 (AAR44746)  
 CC linked to a leader sequence (residues 1-53) suitable for promoting  
 CC expression in E. coli. The protein when in association with a matrix can  
 CC induce at the locus of an implant the full development cascade of  
 CC endochondral bone formation including vascularisation, mineralisation and  
 CC bone marrow differentiation. The osteogenic protein can also be used to  
 CC repair both bone and cartilage in the treatment of osteoarthritis.  
 CC (Updated on 01-JUL-2002 to add missing PA field.) (Updated on 25-MAR-2003  
 CC to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)  
 CC  
 XX Sequence 484 AA;  
 SQ  
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 Best Local Similarity 100.0%; Pred. No. 2e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 INPETHPCCAPTOLNAIS 20  
 DB 439 INPETHPCCAPTOLNAIS 458  
 RESULT 200  
 AAR51657  
 ID AAR51657 standard; protein; 484 AA.  
 XX  
 XX AAR51657;  
 AC  
 DT 25-MAR-2003 (revised)  
 DT 01-JUL-2002 (revised)  
 DT 09-JUN-1995 (first entry)  
 XX  
 DE Osteogenic fusion protein 1C OPIC.  
 XX  
 KW Osteogenic protein 1C; OPIC; osteoarthritis; osteogenesis;  
 KW cartilage and endochondral bone formation; allograft repair;  
 KW periodontal, dental and craniofacial reconstruction;  
 KW non-union fracture repair.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..53  
 FT /label= sig peptide  
 FT /note= "MLR leader sequence"  
 XX  
 PN US3534557-A.  
 PD 11-OCT-1994.  
 XX  
 PF 18-DEC-1992; 92US-00993387.  
 XX  
 XX 08-APR-1988; 88US-00179406.  
 PR 15-AUG-1988; 88US-00232630.  
 PR 23-FEB-1989; 89US-00315342.  
 PR 17-OCT-1989; 89US-00422613.  
 PR 17-OCT-1989; 89US-00422699.  
 PR 22-FEB-1990; 90US-00483913.  
 PR 20-AUG-1990; 90US-00569920.  
 PR 07-SEP-1990; 90US-00579865.  
 PR 18-OCT-1990; 90US-00599543.  
 PR 18-OCT-1990; 90US-00600024.  
 PR 21-NOV-1990; 90US-00616374.  
 PR 04-DEC-1990; 90US-00621849.  
 PR 04-DEC-1990; 90US-00621988.  
 PR 22-FEB-1991; 91US-00660162.  
 PR 20-DEC-1991; 91US-00810560.  
 PR 28-JAN-1992; 92US-00827052.  
 PR 21-FEB-1992; 92US-00841646.  
 XX  
 PA (STYC ) STRYKER CORP.  
 PI Rueger DC, Kubersampath T, Ozkaynak E, Oppermann H;  
 XX  
 DR WPI; 1994-324521/40.  
 DR N-PSDB; AAQ2713.  
 XX  
 PT Implantable device for inducing osteogenesis - comprises porous matrix  
 PT contg. non-glycosylated dimeric, di-sulphide linked osteogenic protein.  
 XX  
 PS Disclosure; Col 105-108; 128pp; English.  
 XX  
 CC AAQ2713 encodes AAR51657 the osteogenic fusion protein 1C (OPIC) which  
 CC includes a MLR leader sequence suitable for promoting expression in E.  
 CC coli. Fragments of the osteogenic unglycosylated polypeptides produced  
 CC can be disulphide bonded to form dimers, which form an essential  
 CC component of an osteogenic protein. This protein is dispersed in a  
 CC biodegradable matrix which can be implanted into a mammalian bone marrow

CC cavity, here it can induce local cartilage, bone and endochondrial bone  
CC formation; and it can also accelerate allograft repair. This implant has  
CC the advantage of inducing all stages of bone formation and of having a  
CC higher specific activity than other known bioresorbable materials. The  
CC implant can be used to repair non-union fractures and cartilage; treat  
CC osteoarthritis; and aid in periodontal, dental or craniofacial  
CC reconstruction. (Updated on 01-JUL-2002 to add missing PA field.)  
CC (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to  
CC correct PR field.)  
XX

SO Sequence 484 AA;

Query Match 100.0%; Score 111; DB 2; Length 484;

Best Local Similarity 100.0%; Pred. No. 2e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPCCAPTQNLNAIS 20

DB 439 INPETHPCCAPTQNLNAIS 458

Search completed: October 26, 2004, 07:50:46  
Job time : 168 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: October 26, 2004, 07:25:29 ; Search time 39 Seconds  
(without alignments)  
34.009 Million cell updates/sec

Title: US-10-619-910-11

Perfect score: 111  
Sequence: 1 INPETHVPCAPQOLNAIS 20

Scoring table: BLOSUM62  
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Searched: 478139 seqs, 66318000 residues

Total number of hits satisfying chosen parameters: 478139

Minimum DB seq length: 0  
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Post-processing: Minimum Match 0%  
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Listing first 200 summaries

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Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

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5	111	100.0	102	3 US-08-289-222E-27	Sequence 27, App1
6	111	100.0	102	3 US-08-054-526B-27	Sequence 27, App1
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8	111	100.0	102	3 US-08-981-739-161	Sequence 161, App1
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144	111	100.0	431	2	US-08-461-397A-17
145	111	100.0	431	2	US-08-912-088-17
146	111	100.0	431	3	US-08-278-730A-17
147	111	100.0	431	3	US-08-458-811-2
148	111	100.0	431	3	US-08-889-419-2
149	111	100.0	431	3	US-08-445-467-17
150	111	100.0	431	3	US-08-480-515A-17
151	111	100.0	431	3	US-08-459-129-2
152	111	100.0	431	3	US-09-219-391-4
153	111	100.0	431	3	US-08-469-411-6
154	111	100.0	431	3	US-09-019-339B-2
155	111	100.0	431	3	US-09-170-936-17
156	111	100.0	431	3	US-08-402-542-2
157	111	100.0	431	3	US-08-461-113-17
158	111	100.0	431	4	US-08-828-281B-5
159	111	100.0	431	4	US-09-887-801-2
160	111	100.0	431	4	US-08-456-033-17
161	111	100.0	431	4	US-08-643-321-16
162	111	100.0	431	4	US-08-338-622-2
163	111	100.0	431	4	US-09-148-925C-2
164	111	100.0	431	4	US-08-957-425-2
165	111	100.0	431	4	US-09-780-601A-6
166	111	100.0	431	4	US-08-448-371A-10
167	111	100.0	431	4	US-09-374-958C-39
168	111	100.0	431	4	US-09-672-224A-2
169	111	100.0	431	5	US-08-937-755-2
170	111	100.0	431	5	PCT-US90-07654-4
171	111	100.0	431	5	PCT-US91-07635-2
172	111	100.0	431	5	PCT-US91-01968-17
173	111	100.0	431	5	PCT-US93-05446-2

Sequence 14, Appl	174	111	100.0	431	5	PCT-US93-07189-2
Sequence 255, App	175	111	100.0	431	5	PCT-US93-07190-17
Sequence 263, App	176	111	100.0	431	5	PCT-US93-07331-17
Sequence 263, App	177	111	100.0	431	5	PCT-US93-08742-17
Sequence 11, Appl	178	111	100.0	431	5	PCT-US93-08808-17
Sequence 11, Appl	179	111	100.0	431	5	PCT-US93-10885-17
Sequence 11, Appl	180	111	100.0	431	5	PCT-US93-10820-4
Sequence 11, Appl	181	111	100.0	431	5	PCT-US95-05467-10
Sequence 11, Appl	182	111	100.0	431	5	PCT-US95-06224-2
Sequence 11, Appl	183	111	100.0	432	2	US-08-411-607A-3
Sequence 11, Appl	184	111	100.0	432	4	US-09-361-741-3
Sequence 11, Appl	185	111	100.0	432	4	US-09-461-418-3
Sequence 15, Appl	186	111	100.0	484	4	US-07-841-646-13
Sequence 15, Appl	187	111	100.0	484	1	US-08-147-023-13
Sequence 15, Appl	188	111	100.0	484	1	US-08-447-570-13
Sequence 15, Appl	189	111	100.0	484	2	US-08-449-700-13
Sequence 15, Appl	190	111	100.0	484	2	US-08-449-699A-13
Sequence 15, Appl	191	111	100.0	484	4	US-09-148-925C-13
Sequence 15, Appl	192	111	100.0	484	4	US-08-957-425-13
Sequence 15, Appl	193	108	97.3	139	1	US-08-278-729A-6
Sequence 15, Appl	194	108	97.3	139	1	US-08-155-343A-6
Sequence 2, Appl	195	108	97.3	139	1	US-08-406-672-6
Sequence 2, Appl	196	108	97.3	139	1	US-08-643-563A-6
Sequence 2, Appl	197	108	97.3	139	1	US-08-643-763A-6
Sequence 2, Appl	198	108	97.3	139	1	US-08-462-623-6
Sequence 2, Appl	199	108	97.3	139	1	US-08-451-953A-6
Sequence 2, Appl	200	108	97.3	139	2	US-08-445-468A-6

## ALIGNMENTS

US-09-439-779B-11	Sequence 11, Application US/09439779B	Sequence 2, Appl
Patent No. 6617307		Sequence 17, Appl
GENERAL INFORMATION:		Sequence 17, Appl
APPLICANT: Kyocera Corporation		Sequence 17, Appl
APPLICANT: Nishimura, Yoshiniko		Sequence 17, Appl
APPLICANT: Suzuki, Yoshinaka		Sequence 17, Appl
APPLICANT: Taniguchi, Masao		Sequence 17, Appl
TITLE OF INVENTION: A peptide and Osteogenic Accelerator		Sequence 17, Appl
FILE REFERENCE: 81918-0001		Sequence 17, Appl
CURRENT APPLICATION NUMBER: US/09/439, 779B		Sequence 17, Appl
CURRENT FILING DATE: 2001-09-10		Sequence 17, Appl
NUMBER OF SEQ ID NOS: 11		Sequence 17, Appl
SOFTWARE: Patent in version 3.1		Sequence 17, Appl
SEQ ID NO 11		Sequence 17, Appl
LENGTH: 20		Sequence 17, Appl
TYPE: PRT		Sequence 17, Appl
ORGANISM: Artificial Sequence		Sequence 17, Appl
FEATURES:		Sequence 17, Appl
OTHER INFORMATION:		Sequence 17, Appl
US-09-439-779B-11		Sequence 17, Appl

Query Match 100.0%; Score 111; DB 4; Length 20;

Best Local Similarity 100.0%; Pred. No. 1, le-08; Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPTEVPCCAPQOLNAIS 20  
Db 1 INPTEVPCCAPQOLNAIS 20

US-08-335-583C-47  
Sequence 47, Application US/08335583C  
Patent No. 5693779  
GENERAL INFORMATION:  
APPLICANT: Moos Jr., Malcolm  
APPLICANT: Wang, Shouwan  
APPLICANT: Krinks, Marie  
TITLE OF INVENTION: PRODUCTION AND USE OF

TITLE OF INVENTION: ANTI-DORSALIZING MORPHOGENETIC PROTEIN  
NUMBER OF SEQUENCES: 56  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Knobbe, Martens, Olson and Bear  
STREET: 620 Newport Center Drive 16th Floor  
CITY: Newport Beach  
STATE: CA  
COUNTRY: USA  
ZIP: 92660  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq Version 1.5  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/335,583C  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Altman, Daniel E  
REGISTRATION NUMBER: 34,115  
REFERENCE/DOCKET NUMBER: NIH04.001A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 714-760-0404  
TELEFAX: 714-760-9502  
TELEX:  
INFORMATION FOR SEQ ID NO: 47:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acids  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
HYPOTHETICAL: NO  
ANTI-SENSE: NO  
FRAGMENT TYPE: C-terminal  
ORIGINAL SOURCE:  
US-08-335-583C-47

Query Match 100.0%; Score 111; DB 1; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQLNAIS 20  
DB 57 INPETHKPCAPQLNAIS 76

RESULT 3  
US-08-288-508C-18  
Sequence 18, Application US/08288508C  
Patent No. 5994094  
GENERAL INFORMATION:  
APPLICANT: H then, Gertrud  
APPLICANT: Neidhardt, Helge  
APPLICANT: Paulista, Michael  
TITLE OF INVENTION: NEW GROWTH/DIFFERENTIATING FACTOR OF  
TITLE OF INVENTION: THE TGF- FAMILY  
NUMBER OF SEQUENCES: 40  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Nikaido, Marmelstein, Murray & Oram LLP  
STREET: 655 Fifteenth Street N.W. Suite 330  
CITY: Washington  
STATE: D.C.  
COUNTRY: U.S.A.  
ZIP: 20005-5701  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/288,508C  
FILING DATE: 10-AUG-1994  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 43 26 829.3  
FILING DATE: 10-AUG-1993  
APPLICATION NUMBER: DE P 44 18 222.8  
FILING DATE: 25-MAY-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 44 20 157.5  
FILING DATE: 09-JUN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: JAHNS, Kristina M.  
REGISTRATION NUMBER: P-41,092  
REFERENCE/DOCKET NUMBER: P564-4019  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202) 638-5000  
TELEFAX: (202) 638-4810  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-288-508C-18

Query Match 100.0%; Score 111; DB 2; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQLNAIS 20  
DB 57 INPETHKPCAPQLNAIS 76

RESULT 4  
US-08-478-097A-16  
Sequence 16, Application US/08478097A  
Patent No. 6040431  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE-CHAIN ANALOGS OF TGF-B  
TITLE OF INVENTION: SUPERFAMILY (MORPHONS)  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESSEE: THIBAUDT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/478,097A  
FILING DATE:  
CLASSIFICATION: 530  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDWUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-060  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7100  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 16:

SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note="Op-1 SEQUENCE"  
US-08-478-097A-16

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNALIS 20  
Db 57 INPETHKPCCAPTQNALIS 76

RESULT 5  
US-08-289-222E-27  
Sequence 27, Application US/08289222E  
Patent No. 6120760  
GENERAL INFORMATION:  
APPLICANT: HOTTEN, GERTRUD  
APPLICANT: NEIDHARDT, HELGE  
APPLICANT: BECHTOLD, ROLF  
APPLICANT: POHL, JENS  
TITLE OF INVENTION: GROWTH/DIFFERENTIATION FACTORS OF THE TGF-B  
TITLE OF INVENTION: FAMILY  
NUMBER OF SEQUENCES: 53  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: NIKAIKO, MARVELSTEIN, MURRAY & ORAM  
STREET: 655 FIFTEENTH STREET, N. W., G STREET LOBBY,  
STREET: SUITE 330  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005-5701  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/289,222E  
FILING DATE: 25-AUG-1999  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/289,222  
FILING DATE: 12-AUG-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 44 23 190.3  
FILING DATE: 07-JUL-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: EPO 92102324.8  
FILING DATE: 12-FEB-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/EP93/00350  
FILING DATE: 12-FEB-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: KITTS, MONICA CHIN  
REGISTRATION NUMBER: 36,105  
REFERENCE/DOCKET NUMBER: P564-9021  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202/638-5000  
TELEFAX: 202/638-4810  
INFORMATION FOR SEQ ID NO: 27:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid

STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-289-222E-27

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-09;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNALIS 20  
Db 57 INPETHKPCCAPTQNALIS 76

RESULT 6  
US-09-054-526B-27  
Sequence 27, Application US/09054526B  
Patent No. 6197550  
GENERAL INFORMATION:  
APPLICANT: HOTTEN, GERTRUD  
APPLICANT: NEIDHARDT, HELGE  
APPLICANT: BECHTOLD, ROLF  
APPLICANT: POHL, JENS  
TITLE OF INVENTION: DNA SEQUENCES ENCODING NOVEL  
TITLE OF INVENTION: GROWTH/DIFFERENTIATION FACTORS  
NUMBER OF SEQUENCES: 53  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: NIKAIKO, MARVELSTEIN, MURRAY & ORAM LLP  
STREET: 655 FIFTEENTH STREET, N. W., G STREET LOBBY,  
STREET: SUITE 330  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005-5701  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/054,526B  
FILING DATE: 03-APR-1998  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/289,222  
FILING DATE: 12-AUG-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: DE P 44 23 190.3  
FILING DATE: 01-JUL-1994  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: EPO 92102324.8  
FILING DATE: 12-FEB-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/EP93/00350  
FILING DATE: 12-FEB-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: KITTS, MONICA CHIN  
REGISTRATION NUMBER: 36,105  
REFERENCE/DOCKET NUMBER: P564-8005  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202/638-5000  
TELEFAX: 202/638-4810  
INFORMATION FOR SEQ ID NO: 27:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: linear  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-054-526B-27

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;



QY 1 INPETHKPCCAPTOLNALS 20  
|||||  
Db 57 INPETHKPCCAPTOLNALS 76

## RESULT 7

US-08-931-858E-161  
Sequence 161, Application US/08931858E  
Patent No. 6222022  
GENERAL INFORMATION:  
APPLICANT: JOHNSON, EUGENE M  
APPLICANT: MILBRANDT, JEFFREY D  
APPLICANT: KOTZBAUER, PAUL T  
APPLICANT: LAMPE, PATRICIA A  
APPLICANT: KLEIN, ROBERT  
APPLICANT: DESAUVAGE, FRED  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR  
NUMBER OF SEQUENCES: 239  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MO  
COUNTRY: USA  
ZIP: 63105  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/931,858E  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 971486  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 314-727-5188  
TELEFAX: 314-727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-08-931-858E-161

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
|||||  
Db 57 INPETHKPCCAPTOLNALS 76

## RESULT 8

US-08-981-739-161  
Sequence 161, Application US/08981739  
Patent No. 6232449  
GENERAL INFORMATION:  
APPLICANT: JOHNSON JR., EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.

STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/981,739  
FILING DATE: 31-Aug-1998  
CLASSIFICATION: <unknown>

## PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/US97/03461  
FILING DATE: <unknown>

## ATTORNEY/AGENT INFORMATION:

NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092

## INFORMATION FOR SEQ ID NO: 161:

## SEQUENCE CHARACTERISTICS:

LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 161:  
US-08-981-739-161

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
|||||  
Db 57 INPETHKPCCAPTOLNALS 76

## RESULT 9

US-08-786-284A-1  
Sequence 1, Application US/08786284A  
Patent No. 6273598  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: GRIFFITH, DIANA L  
APPLICANT: CARLSON, WILLIAM D  
APPLICANT: RUEGER, DAVID C  
APPLICANT: SAMPATH, KUBER T  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR PRODUCING  
NUMBER OF SEQUENCES: 8  
TITLE OF INVENTION: MORPHOGEN ANALOGS  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES,  
INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/786,284A  
FILING DATE:  
CLASSIFICATION: 364

ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-102  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-0992  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /product= "hdp-1"  
US-08-786-284A-1

Query Match 100.0%; Score 111; DB 3; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 10  
US-08-128-026-161  
Sequence 161, Application US/09128026  
Patent No. 640335  
GENERAL INFORMATION:  
APPLICANT: JOHNSON JR., EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/128,026  
FILING DATE:  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-6092  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-09-128-026-161

Query Match 100.0%; Score 111; DB 4; Length 102;

Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 11  
US-09-496-398-16  
Sequence 16, Application US/09496398  
Patent No. 6479643  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
TITLE OF INVENTION: SUPERFAMILY (MORPHONS)  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HUEWITZ &  
ADDRESSEE: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/478,097  
FILING DATE: 07-JUN-1995  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 16:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note= "OP-1 SEQUENCE"  
US-09-496-398-16

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5,5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHKPCCAPTOLNAIS 20  
DB 57 INPETHKPCCAPTOLNAIS 76

RESULT 12  
US-09-220-616-161  
Sequence 161, Application US/09220616  
Patent No. 6645317  
GENERAL INFORMATION:

APPLICANT: JOHNSON JR., EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: IBM PC compatible  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/220,616  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/981,739  
FILING DATE: 31-Aug-1998  
APPLICATION NUMBER: PCT/US97/03461  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-09-220-616-161

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
57 INPETHKPCCAPTQLNALS 76

RESULT 13  
US-09-374-958C-55  
Sequence 55, Application US/09374958C  
Patent No. 6677432  
GENERAL INFORMATION:  
APPLICANT: Stryker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, including  
FILE REFERENCE: STR-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patentin version 2.0  
SEQ ID NO 55  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: OP-1  
US-09-374-958C-55

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
57 INPETHKPCCAPTQLNALS 76

RESULT 14  
US-09-220-527-161  
Sequence 161, Application US/09220527  
Patent No. 6692943  
GENERAL INFORMATION:  
APPLICANT: JOHNSON JR., EUGENE M.  
MILBRANDT, JEFFREY D.  
KOTZBAUER, PAUL T.  
LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: IBM PC compatible  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/220,527  
FILING DATE: 24-Dec-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/981,739  
FILING DATE: 31-Aug-1998  
APPLICATION NUMBER: PCT/US97/03461  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 161:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 161:  
US-09-220-527-161

Query Match 100.0%; Score 111; DB 4; Length 102;  
Best Local Similarity 100.0%; Pred. No. 5.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
57 INPETHKPCCAPTQLNALS 76

RESULT 15  
US-09-220-407-161  
Sequence 161, Application US/09220407  
Patent No. 671600  
GENERAL INFORMATION:  
APPLICANT: JOHNSON, EUGENE M

```

APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: KOTZBAUER, PAUL T
APPLICANT: LAMPE, PATRICIA A
APPLICANT: KLEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCE ADDRESS:
ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STATE: MO
COUNTRY: USA
ZIP: 63105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/220,407
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 971486
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-5188
TELEFAX: 314-727-6092
INFORMATION FOR SEQ ID NO: 161:
SEQUENCE CHARACTERISTICS:
LENGTH: 102 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-09-220-407-161

Query Match          100.0%; Score 111; DB 4; Length 102;
Best Local Similarity 100.0%; Pred. No. 5.5e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 57 INPETHKPCCAPTOLNAIS 76

RESULT 16
US-09-386-450D-18
Sequence 18, Application US/09386450D
Patent No. 6764994
GENERAL INFORMATION:
APPLICANT: Hotten, Gertud
APPLICANT: Neidhardt, Helge
APPLICANT: Paulista, Michael
TITLE OF INVENTION: NEW GROWTH/DIFFERENTIATING FACTOR OF TGF-? Family
FILE REFERENCE: 100564-09022
CURRENT APPLICATION NUMBER: US/09/386,450D
CURRENT FILING DATE: 1999-08-31
PRIOR APPLICATION NUMBER: US 08/288,508
PRIOR FILING DATE: 1994-08-10
PRIOR APPLICATION NUMBER: DE P 43 26 829.3
PRIOR FILING DATE: 1993-08-10
PRIOR APPLICATION NUMBER: DE P 44 18 222.8
PRIOR FILING DATE: 1994-05-25
PRIOR APPLICATION NUMBER: DE P 44 20 157.5
PRIOR FILING DATE: 1994-06-09
NUMBER OF SEQ ID NOS: 41
SOFTWARE: PatentIn version 3.0

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SEQ ID NO 18
LENGTH: 102
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: DOMAIN
LOCATION: (1)..(102)
OTHER INFORMATION: portion of BMP 7 corresponding to MP 52
US-09-386-450D-18

Query Match          100.0%; Score 111; DB 4; Length 102;
Best Local Similarity 100.0%; Pred. No. 5.5e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 57 INPETHKPCCAPTOLNAIS 76

RESULT 17
US-07-764-731B-8
Sequence 8, Application US/07764731B
Patent No. 5366875
GENERAL INFORMATION:
APPLICANT: Rosen, Vicki A.
APPLICANT: Wang, Elizabeth A.
APPLICANT: Wozney, John M.
TITLE OF INVENTION: Methods for Producing BMP-7 Proteins
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.
STREET: 87 Cambridgepark Drive
CITY: Cambridge
STATE: MA
COUNTRY: USA
ZIP: 02140
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/764,731B
FILING DATE: 19910924
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Kapinos, Ellen J.
REGISTRATION NUMBER: 32,245
REFERENCE/DOCKET NUMBER: G151593
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-876-1170
TELEFAX: 617-876-5851
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 104 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-764-731B-8

Query Match          100.0%; Score 111; DB 1; Length 104;
Best Local Similarity 100.0%; Pred. No. 5.6e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 59 INPETHKPCCAPTOLNAIS 78

RESULT 18
US-09-374-958C-69
Sequence 69, Application US/09374958C
Patent No. 6677432

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Tue Oct 26 09:17:06 2004

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Page 9

GENERAL INFORMATION:  
APPLICANT: Stryker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, Including  
TITLE OF INVENTION: Modified Morphogenic Proteins  
FILE REFERENCE: STR-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patentin version 2.0  
SEQ ID NO 69  
LENGTH: 117  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Trypsin truncated H2223 mutant  
US-09-374-958C-69

Query Match 100.0%; Score 111; DB 4; Length 117;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 72 INPETHKPCCAPTOLNAIS 91

RESULT 19  
US-08-481-377-12  
Sequence 12, Application US/08481377  
Patent No. 5808007  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/481.377  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00666  
FILING DATE: 12-JAN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-08-481-377-12

Query Match 100.0%; Score 111; DB 1; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 73 INPETHKPCCAPTOLNAIS 92

RESULT 20  
US-08-491-835-10  
Sequence 10, Application US/08491835  
Patent No. 5821056  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/491.835  
FILING DATE: 23-OCT-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00685  
FILING DATE: 12-JAN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr. Ph.D., John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3288  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-08-491-835-10

Query Match 100.0%; Score 111; DB 2; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6.3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 73 INPETHKPCCAPTOLNAIS 92

RESULT 21  
US-09-153-733A-12  
Sequence 12, Application US/09153733A  
Patent No. 6025475  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY

TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/153,733A  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/481,377  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-09-153-733A-12

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6,3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 73 INPETHKPCCAPTOLNAIS 92

RESULT 22  
US-08-946-092A-10  
Sequence 10, Application US/08946092A  
Patent No. 6030617  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/946,092A

FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/491,835  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr. Ph.D., John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3288  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-08-946-092A-10

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6,3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 73 INPETHKPCCAPTOLNAIS 92

RESULT 23  
US-09-172-062-10  
Sequence 10, Application US/09172062  
Patent No. 6191261  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/172,062  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/491,835  
FILING DATE: 23-OCT-1995  
APPLICATION NUMBER: PCT/US94/00685  
FILING DATE: 12-JAN-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr. Ph.D., John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3288  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:

LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-09-172-062-10

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6,3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 73 INPETHKPCCAPTQLNALS 92

RESULT 24  
US-09-301-520D-10  
Sequence 10, Application US/09301520D  
Patent No. 6365402  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
FILE REFERENCE: JH1190-3  
CURRENT APPLICATION NUMBER: US/09/301,520D  
CURRENT FILING DATE: 1999-04-28  
PRIOR APPLICATION NUMBER: US 09/172,062  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: US 08/491,835  
PRIOR FILING DATE: 1995-10-23  
PRIOR APPLICATION NUMBER: PCT/US94/00665  
PRIOR FILING DATE: 1994-01-12  
PRIOR APPLICATION NUMBER: US 08/003,303  
PRIOR FILING DATE: 1993-01-12  
NUMBER OF SEQ ID NOS: 28  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 10  
LENGTH: 118  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-301-520D-10

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6,3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 73 INPETHKPCCAPTQLNALS 92

RESULT 25  
US-09-389-705-12  
Sequence 12, Application US/09389705  
Patent No. 6391565  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
US-09-389-705-12

Query Match 100.0%; Score 111; DB 3; Length 118;  
Best Local Similarity 100.0%; Pred. No. 6,3e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 73 INPETHKPCCAPTQLNALS 92

RESULT 26  
PCT-US94-00666-12  
Sequence 12, Application PC/TUS9400666  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00666  
FILING DATE: 12-JAN-1994  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:

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SEQUENCE CHARACTERISTICS:
LENGTH: 118 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: OP-1
FEATURE:
NAME/KEY: Protein
LOCATION: 1..118
PCT-US94-00666-12

Query Match      100.0%; Score 111; DB 5; Length 118;
Best Local Similarity 100.0%; Pred. No. 6.3e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 73 INPETHKPCCAPTOLNAIS 92

RESULT 27
PCT-US94-00685-10
Sequence 10, Application PC/TUS9400685
GENERAL INFORMATION:
APPLICANT: THE JOHNS HOPKINS UNIVERSITY
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 1880 Century Park East, Suite 500
CITY: Los Angeles
STATE: California
COUNTRY: US
ZIP: 90067
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/00685
FILING DATE: 12-JAN-1994
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Wetherell, Jr. Ph.D., John R.
REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: PD3288
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 455-5100
TELEFAX: (619) 455-5100
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 118 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: OP-1
FEATURE:
NAME/KEY: Protein
LOCATION: 1..118
PCT-US94-00685-10

Query Match      100.0%; Score 111; DB 5; Length 118;
Best Local Similarity 100.0%; Pred. No. 6.3e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 73 INPETHKPCCAPTOLNAIS 92
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```
RESULT 28
US-08-581-529B-12
Sequence 12, Application US/08581529B
Patent No. 5770444
GENERAL INFORMATION:
APPLICANT: Lee, Se-jin
APPLICANT: Huynh, Thanh
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: California
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/581,529B
FILING DATE: 15-APR-1996
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Lisa A. Hallie, Ph.D.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 07265/082001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 678-5070
TELEFAX: (619) 678-5099
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: OP-1
FEATURE:
NAME/KEY: Protein
LOCATION: 1..119
US-08-581-529B-12

Query Match      100.0%; Score 111; DB 1; Length 119;
Best Local Similarity 100.0%; Pred. No. 6.4e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 29
US-08-455-559-18
Sequence 18, Application US/08455559
Patent No. 5801014
GENERAL INFORMATION:
APPLICANT: Lee, Se-jin
APPLICANT: HUYNH, THANH
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
CITY: LOS ANGELES
STATE: CALIFORNIA
COUNTRY: US
ZIP: 90067
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COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/455,559  
FILING DATE: 31-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/003,144  
FILING DATE: 12-JAN-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. PH.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD2280  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619/455-5100  
TELEFAX: 619-455-5110  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-08-455-559-18

Query Match 100.0%; Score 111; DB 1; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNIAIS 20  
DB 74 INPETYKPCCAPTQLNIAIS 93

RESULT 30  
US-08-525-596B-22  
Sequence 22, Application US/08525596B  
Patent No. 5827733  
GENERAL INFORMATION:  
APPLICANT: Huynh, Thanh  
APPLICANT: Lee, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/525,596B  
FILING DATE: 19-SEP-1995  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D. John R.  
REGISTRATION NUMBER: 31,678

REFERENCE/DOCKET NUMBER: 07265/075001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-678-5070  
TELEFAX: 619-678-5099  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-08-525-596B-22

Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNIAIS 20  
DB 74 INPETYKPCCAPTQLNIAIS 93

RESULT 31  
US-08-581-528A-12  
Sequence 12, Application US/08581528A  
Patent No. 5986058  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-7  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson, P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/581,528A  
FILING DATE: 03-SEP-1993  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/089,570  
FILING DATE: 09-JUL-1993  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Hallie, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/081001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619/678-5070  
TELEFAX: 619/678-5099  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1..119  
US-08-581-528A-12  
Query Match 100.0%; Score 111; DB 2; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93  
RESULT 32  
US-09-097-616-12  
Sequence 12, Application US/09097616  
Patent No. 6090563  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESSES:  
ADDRESSES: Fish & Richardson  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: California  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/097,616  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/581,529  
FILING DATE: 15-APR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Halle, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/082001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 678-5070  
TELEFAX: (619) 678-5099  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-09-097-616-12  
Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93  
RESULT 33  
US-09-177-860A-22  
Sequence 22, Application US/09177860A

Patent No. 6096506  
GENERAL INFORMATION:  
APPLICANT: Huynh, Thanh  
APPLICANT: Lee, Se-Jin  
TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR GROWTH DIFFERENTIATION FACTOR-8 AN  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESSES:  
ADDRESSES: Gray Cary Ware & Freidenrich LLP  
STREET: 4365 Executive Drive, Suite 1600  
CITY: San Diego  
STATE: CA  
COUNTRY: US  
ZIP: 92121  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FASTSEQ for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/177,860A  
FILING DATE: 23-OCT-1998  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/525,596  
FILING DATE: 19-SEP-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: Halle, Ph.D., Lisa A.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/075003  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 858-677-1456  
TELEFAX: 858-677-1465  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-09-177-860A-22  
Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93  
RESULT 34  
US-08-624-635-13  
Sequence 13, Application US/08624635  
Patent No. 6204047  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Cunningham, No. 6204047een  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESSES:  
ADDRESSES: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/624,635  
FILING DATE: 16-AUG-1996  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/134,078  
FILING DATE: 08-OCT-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D., John R.,  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD-3054  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
US-08-624-635-13

Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNALS 20  
Db 74 INPETYKPCCAPTQLNALS 93

RESULT 35  
US-09-145-060-18  
Sequence 18, Application US/09145060  
Patent No. 6245896  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Uin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5  
NUMBER OF SEQUENCES: 27  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson, P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/145,060  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/455,559  
FILING DATE: 31-MAY-1995  
APPLICATION NUMBER: 08/003,144  
FILING DATE: 12-JAN-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Halle, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/057001  
TELECOMMUNICATION INFORMATION:

TELEPHONE: 619/678-5070  
TELEFAX: 619/678-5099  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
US-09-145-060-18

Query Match 100.0%; Score 111; DB 3; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNALS 20  
Db 74 INPETYKPCCAPTQLNALS 93

RESULT 36  
US-09-378-238-26  
Sequence 26, Application US/09378238  
Patent No. 6465238  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Uin  
APPLICANT: McPherson, Alexandra C.  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8 NUCLEIC  
TITLE OF INVENTION: ACID AND POLYPEPTIDES FROM AQUATIC SPECIES AND NON-HUMAN  
FILE REFERENCE: JHU1120-9  
CURRENT APPLICATION NUMBER: US/09/378,238  
CURRENT FILING DATE: 1999-08-19  
EARLIER APPLICATION NUMBER: 08/795,071  
EARLIER FILING DATE: 1997-02-05  
EARLIER APPLICATION NUMBER: 08/525,596  
EARLIER FILING DATE: 1995-10-25  
EARLIER APPLICATION NUMBER: PCT/US94/03019  
EARLIER FILING DATE: 1994-03-18  
EARLIER APPLICATION NUMBER: 08/033,923  
EARLIER FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 26  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: OP-1  
US-09-378-238-26

Query Match 100.0%; Score 111; DB 4; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNALS 20  
Db 74 INPETYKPCCAPTQLNALS 93

RESULT 37  
US-09-629-938-22  
Sequence 22, Application US/09629338  
Patent No. 6500664  
GENERAL INFORMATION:  
APPLICANT: Huynh, Thanh  
APPLICANT: Lee, Se-Uin  
TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR GROWTH DIFFERENTIATION  
FACTOR-8 AND METHODS OF USING SAME (Amended)  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Gray Cary Ware & Freidenrich LLP

STREET: 4365 Executive Drive, Suite 1600  
CITY: San Diego  
STATE: CA  
COUNTRY: US  
ZIP: 92121  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/629,938  
FILING DATE: 01-Aug-2000  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/177,860  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Haile, Ph.D., Lisa A.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/075003  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 858-677-1456  
TELEFAX: 858-677-1465  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
MOLECULE TYPE: Protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 22:  
US-09-629-938-22  
Query Match 100.0%; Score 111; DB 4; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNIAIS 20  
DB 74 INPETHKPCCAPTQLNIAIS 93  
RESULT 38  
US-09-686-344-40  
Sequence 40, Application US/09686344  
Patent No. 6607884  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
FILE REFERENCE: 07265/144001  
CURRENT APPLICATION NUMBER: US/09/686,344  
CURRENT FILING DATE: 2000-10-10  
PRIOR APPLICATION NUMBER: 08/662,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: 08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: 08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: 08/525,596  
PRIOR FILING DATE: 1995-10-26  
PRIOR APPLICATION NUMBER: PCT/US94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: 08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 51  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 40

LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-686-344-40  
Query Match 100.0%; Score 111; DB 4; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNIAIS 20  
DB 74 INPETHKPCCAPTQLNIAIS 93  
RESULT 39  
US-09-412-791D-12  
Sequence 12, Application US/09412791D  
Patent No. 6680372  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-Jin  
APPLICANT: HUYNH, Thanh  
TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7  
FILE REFERENCE: JHU1130-2  
CURRENT APPLICATION NUMBER: US/09/412,791D  
CURRENT FILING DATE: 1999-10-05  
PRIOR APPLICATION NUMBER: US 08/581,528  
PRIOR FILING DATE: 1996-01-09  
PRIOR APPLICATION NUMBER: PCT/US94/07799  
PRIOR FILING DATE: 1994-07-08  
NUMBER OF SEQ ID NOS: 21  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 12  
TYPE: PRT  
LENGTH: 119  
ORGANISM: Homo sapiens  
US-09-412-791D-12  
Query Match 100.0%; Score 111; DB 4; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNIAIS 20  
DB 74 INPETHKPCCAPTQLNIAIS 93  
RESULT 40  
US-09-619-061-12  
Sequence 12, Application US/09619061  
Patent No. 6713302  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: HUYNH, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: California  
COUNTRY: USA  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/619,061  
FILING DATE: 18-Jul-2000  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/097,616  
FILING DATE: 15-JUN-1998  
APPLICATION NUMBER: US 08/581,529  
FILING DATE: 15-APR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Haller, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/082001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 678-5070  
TELEFAX: (619) 678-5099  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:-  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 12:  
US-09-619-061-12

Query Match 100.0%; Score 111; DB 4; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTNLAIS 20  
DB 74 INPETHKPCAPQTNLAIS 93

RESULT 41  
PCT-US94-00657-18  
Sequence 18, Application PC/TUS9400657  
GENERAL INFORMATION:  
APPLICANT: SE-JIN LEE  
APPLICANT: HUYNH, THANH  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5  
NUMBER OF SEQUENCES: 27  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/00657  
FILING DATE: 1/12/94  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERILL, JR. PH.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD3256 CIP OF PD2280  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619/455-5100  
TELEFAX: 619-455-5110  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein

IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
PCT-US94-00657-18

Query Match 100.0%; Score 111; DB 5; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTNLAIS 20  
DB 74 INPETHKPCAPQTNLAIS 93

RESULT 42  
PCT-US94-07762-12  
Sequence 12, Application PC/TUS9407762  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: TUMARKIN, LISA A., PH.D.  
REGISTRATION NUMBER: P-38,347  
REFERENCE/DOCKET NUMBER: FD3349  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
PCT-US94-07762-12

Query Match 100.0%; Score 111; DB 5; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6,4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTNLAIS 20  
DB 74 INPETHKPCAPQTNLAIS 93

RESULT 43  
PCT-US94-07799-12  
Sequence 12, Application PC/TUS9407799  
GENERAL INFORMATION:

APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-7  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubae & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/07799  
FILING DATE: 08-JUL-1994  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: TUVARKIN, LISA A., PH.D.  
REGISTRATION NUMBER: P-38,347  
REFERENCE/DOCKET NUMBER: PD-2348  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
PCT-US94-07799-12

Query Match 100.0%; Score 111; DB 5; Length 119;  
Best Local Similarity 100.0%; Pred. No. 6.4e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 74 INPETHKPCCAPTOLNAIS 93

RESULT 44  
US-07-718-274A-2  
Sequence 2, Application US/07718274A  
Patent No. 5284756  
GENERAL INFORMATION:  
APPLICANT: Grinna, Lynn  
APPLICANT: Parsons, Thomas F.  
APPLICANT: Theofan, Georgia  
TITLE OF INVENTION: Osteogenic Factor  
NUMBER OF SEQUENCES: 63  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &  
ADDRESSEE: Bicknell  
STREET: Two First National Plaza, 20 South Clark  
STREET: Street  
CITY: Chicago  
STATE: Illinois  
COUNTRY: USA  
ZIP: 60603  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/718, 274A  
FILING DATE: 19910620  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/415,555  
FILING DATE: 04-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/256,034  
FILING DATE: 11-OCT-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Sharp, Jeffrey S.  
REGISTRATION NUMBER: 31,879  
REFERENCE/DOCKET NUMBER: 27129/9430  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (312) 346-5750  
TELEFAX: (312) 984-9740  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-718-274A-2

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113

RESULT 45  
US-08-163-877-10  
Sequence 10, Application US/08163877  
Patent No. 5399677  
GENERAL INFORMATION:  
APPLICANT: McCoy, John  
APPLICANT: Murray, Beth  
APPLICANT: Wolfman, Neil  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/163,877  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617 876-1170 x 8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
US-08-163-877-10

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNALS 20  
DB 94 INPETHKPCAPQNLNALS 113

RESULT 46  
US-08-149-106-2  
Sequence 2, Application US/08149106  
Patent No. 5411941  
GENERAL INFORMATION:  
APPLICANT: Grinna, Lynn  
APPLICANT: Parsons, Thomas F.  
APPLICANT: Theofan, Georgia  
TITLE OF INVENTION: Osteogenic Factor  
NUMBER OF SEQUENCES: 63  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &  
ADDRESSEE: Bicknell  
STREET: Two First National Plaza, 20 South Clark  
STREET: Street  
CITY: Chicago  
STATE: Illinois  
COUNTRY: USA  
ZIP: 60603  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/149,106  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/415,555  
FILING DATE: 04-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/256,034  
FILING DATE: 11-OCT-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Sharp, Jeffrey S.  
REGISTRATION NUMBER: 31,879  
REFERENCE/DOCKET NUMBER: 27129/9430  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (312) 346-5750  
TELEFAX: (312) 984-9740  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-149-106-2

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNALS 20  
DB 94 INPETHKPCAPQNLNALS 113

RESULT 47  
US-08-298-021-2

Sequence 2, Application US/08298021  
Patent No. 5508263

GENERAL INFORMATION:  
APPLICANT: Grinna, Lynn  
APPLICANT: Parsons, Thomas F.  
APPLICANT: Theofan, Georgia  
TITLE OF INVENTION: Heterodimeric Osteogenic Factor  
NUMBER OF SEQUENCES: 63  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-64023

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/298,021  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/149,106  
FILING DATE: 11-OCT-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/718,274  
FILING DATE: 20-JUN-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/415,555  
FILING DATE: 04-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/256,034  
FILING DATE: 11-OCT-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: Sharp, Jeffrey S.  
REGISTRATION NUMBER: 31,879  
REFERENCE/DOCKET NUMBER: 27129/32196  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-298-021-2

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNALS 20  
DB 94 INPETHKPCAPQNLNALS 113

RESULT 48  
US-08-278-729A-5  
Sequence 5, Application US/08278729A  
Patent No. 5650276

GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OKRAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
APPLICANT: COHEN, CHARLES M.

TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278.729A  
FILING DATE: 20-JUN-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER Esq., EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-278-729A-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHPCPCAPTQNLNLS 20  
Db 94 INPETHPCPCAPTQNLNLS 113

RESULT 49  
US-08-155-343A-5  
Sequence 5, Application US/08155343A  
Patent No. 5656593  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/155.343A  
FILING DATE: 15-NOV-1993  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-155-343A-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHPCPCAPTQNLNLS 20  
Db 94 INPETHPCPCAPTQNLNLS 113

RESULT 50  
US-08-406-672-5  
Sequence 5, Application US/08406672  
Patent No. 5674494  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR  
TITLE OF INVENTION: INCREASE BONE MASS IN METABOLIC BONE DISEASES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/406.672  
FILING DATE: 20-MAR-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-060CN  
TELECOMMUNICATION INFORMATION:



TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-406-672-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTOLNAIS 20  
Db 94 INPETHKPCAPQTOLNAIS 113

RESULT 51  
US-08-643-563A-5  
Sequence 5, Application US/08643563A  
Patent No. 5707810  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,563A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: TWOMEY ESQ., MICHAEL J.  
REGISTRATION NUMBER: 36,349  
REFERENCE/DOCKET NUMBER: CRP-058CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-643-563A-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTOLNAIS 20  
Db 94 INPETHKPCAPQTOLNAIS 113

RESULT 52  
US-08-643-763A-5  
Sequence 5, Application US/08643763A  
Patent No. 5733878  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
REGENERATION.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,763A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-643-763A-5

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQTOLNAIS 20  
Db 94 INPETHKPCAPQTOLNAIS 113

RESULT 53  
US-08-462-623-5  
Sequence 5, Application US/08462623  
Patent No. 5739107  
GENERAL INFORMATION:

APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: ULCERS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/462,623  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-462-623-5  
Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Oy 1 INPETHKPCCAPTOLNALS 20  
Db 94 INPETHKPCCAPTOLNALS 113  
RESULT 54  
US-08-451-953A-5  
Sequence 5, Application US/08451953A  
Patent No. 5741641  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/451,953A  
FILING DATE: 26-MAY-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-451-953A-5  
Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Oy 1 INPETHKPCCAPTOLNALS 20  
Db 94 INPETHKPCCAPTOLNALS 113  
RESULT 55  
US-08-360-914B-10  
Sequence 10, Application US/08360914B  
Patent No. 5756308  
GENERAL INFORMATION:  
APPLICANT: NEIL M. WOLFMAN and John McCoy  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/360,914B  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/163,877  
FILING DATE: December 7, 1993  
ATTORNEY/AGENT INFORMATION:

NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219B  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617 498-8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-360-914B-10

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

CY 1 INPETHKPCAPTOLNIS 20  
DB 94 INPETHKPCAPTOLNIS 113

RESULT 56  
US-08-741-589A-10  
Sequence 10, Application US/08741589A  
Patent No. 5804416  
GENERAL INFORMATION:  
APPLICANT: Neil M. WOLFMAN and John MCCOY  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/741,589A  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/163,877  
FILING DATE: December 7, 1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219B-DIV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617 498-8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-741-589A-10

Query Match 100.0%; Score 111; DB 1; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

CY 1 INPETHKPCAPTOLNIS 20  
DB 94 INPETHKPCAPTOLNIS 113

RESULT 57  
US-08-445-468A-5  
Sequence 5, Application US/08445468A  
Patent No. 5849686  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H. L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,468A  
FILING DATE: 22-MAY-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON BSG., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-072FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1-139  
OTHER INFORMATION: /note="HOP-1 (MATURE FORM)"  
US-08-445-468A-5

Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

CY 1 INPETHKPCAPTOLNIS 20  
DB 94 INPETHKPCAPTOLNIS 113

RESULT 58  
US-08-461-397A-5  
Sequence 5, Application US/08461397A  
Patent No. 5972884  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARLETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H. L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,397A  
FILING DATE: 05-JUN-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESO, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-074FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-461-397A-5  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCCAPTQLNALIS 20  
DB 94 INPETHPCCAPTQLNALIS 113  
RESULT 59  
US-08-912-088-5  
Sequence 5, Application US/08912088  
Patent No. 5894131  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/912,088  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/278,729  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESO, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-912-088-5  
Query Match 100.0%; Score 111; DB 2; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCCAPTQLNALIS 20  
DB 94 INPETHPCCAPTQLNALIS 113  
RESULT 60  
US-08-278-730A-5  
Sequence 5, Application US/08278730A  
Patent No. 6022853  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-ENRICHED DIETARY COMPOSITION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,730A  
FILING DATE: 20-JULY-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PENTON ESO, GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-071FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids

TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-278-730A-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
Db 94 INPETHKPCCAPTQLNALS 113

## RESULT 61

US-08-445-467-5  
Sequence 5, Application US/08445467  
Patent No. 6077823  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY HL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: COHEN, CHARLES M  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E  
TITLE OF INVENTION: MORPHOGEN-INDUCED MODULATION OF  
TITLE OF INVENTION: INFLAMMATORY RESPONSE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,467  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/165,511  
FILING DATE:  
APPLICATION NUMBER: US/07/938,336  
FILING DATE:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-059CP.APP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids

TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
US-08-445-467-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
Db 94 INPETHKPCCAPTQLNALS 113

## RESULT 62

US-08-443-676-1  
Sequence 1, Application US/08443676  
Patent No. 6077968  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, Thangavel  
APPLICANT: BERLOWITZ-TARRANT, Lawrence  
TITLE OF INVENTION: SYNTHETIC BONE MATRIX  
NUMBER OF SEQUENCES: 1  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
STREET: Thibault, LLP  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/443,676  
FILING DATE: 18-MAY-1995  
CLASSIFICATION: 623  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, Robin D  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: STR-049DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-08-443-676-1

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
Db 94 INPETHKPCCAPTQLNALS 113

RESULT 63  
US-08-480-515A-5  
Sequence 5, Application US/08480515A  
Patent No. 6090776  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: SMART, JOHN B.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF ORGAN TRANSPLANTS  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/480,515A  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-068FWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-480-515A-5  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNLAIS 20  
DB 94 INPETHKPCCAPTQLNLAIS 113  
RESULT 64  
US-08-414-033A-5  
Sequence 5, Application US/08414033A  
Patent No. 6194376  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: METHOD FOR MODULATING INFLAMMATORY  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Testa, Hurwitz & Thibault

STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/414,033A  
FILING DATE: 30-MAR-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-059FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (mature form)"  
US-08-414-033A-5  
Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNLAIS 20  
DB 94 INPETHKPCCAPTQLNLAIS 113  
RESULT 65  
US-08-271-556A-3  
Sequence 3, Application US/08271556A  
Patent No. 6211146  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: 60A PROTEIN-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 16  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/271,556A  
FILING DATE: 07-JUL-1994  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/945,292

FILING DATE: 15-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/922,813  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON, GILLIAN M  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-066FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hop1-MATURE  
US-08-271-556A-3

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNLS 20  
|||  
Db 94 INPETHKPCAPQNLNLS 113

RESULT 66  
US-08-440-894A-5  
Sequence 5, Application US/08440894A  
Patent No. 6288031  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: SMART, JOHN E  
APPLICANT: PANG, ROY HL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: METHOD FOR MODULATING INFLAMMATORY  
TITLE OF INVENTION: RESPONSE  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/440,894A  
FILING DATE: 15-MAY-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= HOP1-MATURE  
US-08-440-894A-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNLS 20  
|||  
Db 94 INPETHKPCAPQNLNLS 113

RESULT 67  
US-09-170-936-5  
Sequence 5, Application US/09170936  
Patent No. 6333312  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: PANG, ROY H.L.  
APPLICANT: SMART, JOHN E  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR  
TITLE OF INVENTION: INCREASE BONE MASS IN METABOLIC BONE DISEASES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/170,936  
FILING DATE: 514  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/432,883  
FILING DATE: 2-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.

REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-060CPFWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-09-170-936-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 68  
US-08-868-452-46  
Sequence 46, Application US/08868452C  
Patent No. 6352872  
GENERAL INFORMATION:  
APPLICANT: Marcel E. Nimmi  
APPLICANT: Frederick L. Hall  
APPLICANT: Lingtao Wu  
APPLICANT: Bo Han  
APPLICANT: Edwin Shore  
TITLE OF INVENTION: BONE MORPHOGENETIC PROTEINS AND THEIR  
TITLE OF INVENTION: USE IN BONE GROWTH  
FILE REFERENCE: 17972-11  
CURRENT APPLICATION NUMBER: US/08/868,452C  
CURRENT FILING DATE: 1997-06-03  
NUMBER OF SEQ ID NOS: 51  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 46  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Human  
US-08-868-452-46

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 69  
US-08-461-113-5  
Sequence 5, Application US/08461113  
Patent No. 6399569  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARBET, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMBITING

TITLE OF INVENTION: PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-461-113-5

Query Match 100.0%; Score 111; DB 3; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 70  
US-08-456-033-5  
Sequence 5, Application US/08456033  
Patent No. 6495513  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk



COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/456,033  
FILING DATE: 31-MAY-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON BSG, GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-070DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "HOP-1 (MATURE FORM)"  
US-08-456-033-5

Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

RESULT 71  
US-08-643-321-4  
Sequence 4, Application US/08643321  
Patent No. 6498142  
GENERAL INFORMATION:  
APPLICANT: SAMPATH, KUBER T.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR CHRONIC  
TITLE OF INVENTION: RENAL FAILURE  
NUMBER OF SEQUENCES: 31  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,321  
FILING DATE:  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: TMOEY, MICHAEL J  
REGISTRATION NUMBER: 38,349  
REFERENCE/DOCKET NUMBER: CRP-118  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7000  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid

STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hOP1-MATURE  
US-08-643-321-4

Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

RESULT 72  
US-09-464-206-5  
Sequence 5, Application US/09464206  
Patent No. 6531445  
GENERAL INFORMATION:  
APPLICANT: Cohen, Charles M.  
APPLICANT: KuberSampath, Thangavel  
APPLICANT: Oppermann, Hermann  
APPLICANT: Rueger, David C.  
TITLE OF INVENTION: Protein Induced Morphogenesis  
FILE REFERENCE: CEM-2 DIV (00960-502 DIV)  
CURRENT APPLICATION NUMBER: US/09/464,206  
CURRENT FILING DATE: 1999-12-15  
PRIOR APPLICATION NUMBER: 08/396,684  
PRIOR FILING DATE: 1995-03-01  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: tissue type hippocampus hOP1-MATURE  
US-09-464-206-5

Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 94 INPETHKPCCAPTQLNIAIS 113

RESULT 73  
US-08-404-113A-5  
Sequence 5, Application US/08404113A  
Patent No. 6565843  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C.  
TITLE OF INVENTION: PROTEIN-INDUCED TISSUE MORPHOGENESIS.  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Testa, Hurwitz & Thibault  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA

ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/404,113A  
FILING DATE: 14-MAR-1995  
CLASSIFICATION: 424  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., Gilliam M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-052CP FWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note="HOP-1 (mature form)"  
US-08-404-113A-5  
Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113  
RESULT 74  
US-09-882-875A-1  
Sequence 1, Application US/09882875A  
Patent No. 6605117  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, Thangavel  
TITLE OF INVENTION: SYNTHETIC BONE MATRIX  
NUMBER OF SEQUENCES: 1  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/882,875A  
FILING DATE: 15-Jun-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/104,865  
FILING DATE: 25-JUN-1998  
APPLICATION NUMBER: US 08/443,676  
FILING DATE: 18-MAY-1995  
APPLICATION NUMBER: US 07/529,852  
FILING DATE: 29-MAY-1990  
ATTORNEY/AGENT INFORMATION:

NAME: VITO, Christine C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: STK-049CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: <Unknown>  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
US-09-882-875A-1  
Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113  
RESULT 75  
US-09-374-958C-68  
Sequence 68, Application US/09374958C  
Patent No. 6677432  
GENERAL INFORMATION:  
APPLICANT: Stryker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, Including  
TITLE OF INVENTION: Modified Morphogenic Proteins  
FILE REFERENCE: STK-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patent version 2.0  
SEQ ID NO 68  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Mature H2223 mutant  
US-09-374-958C-68  
Query Match 100.0%; Score 111; DB 4; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 94 INPETHKPCCAPTOLNAIS 113  
RESULT 76  
PCT-US92-01968-5  
Sequence 5, Application PC/TUS9201968  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: RUEGER, DAVID C  
TITLE OF INVENTION: PROTEIN-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBAUT  
STREET: EXCHANGE PLACE 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US92/01968  
FILING DATE: 19920311  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-052PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: AMINO ACID  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= h0p1-MATURE  
PCT-US92-01968-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNMAIS 20  
Db 94 INPETHKPCCAPTQLNMAIS 113

RESULT 77  
PCT-US93-07190-5  
Sequence 5, Application PC/TUS9307190  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-ENRICHED DIETARY COMPOSITION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07190  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-071  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000

TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= h0p1-MATURE  
PCT-US93-07190-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNMAIS 20  
Db 94 INPETHKPCCAPTQLNMAIS 113

RESULT 78  
PCT-US93-07231-5  
Sequence 5, Application PC/TUS9307231  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MASSACHUSETTS  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07231  
FILING DATE: 19930729  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= h0p1-MATURE  
PCT-US93-07231-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTOLNAIS 20  
DB 94 INPETHPKPCCAPTOLNAIS 113

RESULT 79  
PCT-US93-08742-5  
Sequence 5, Application PC/TUS9308742  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-INDUCED PERIODONTAL TISSUE REGENERATION  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08742  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESO, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-067  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
OTHER INFORMATION: /label= hop1-MATURE  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION:  
PCT-US93-08742-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTOLNAIS 20  
DB 94 INPETHPKPCCAPTOLNAIS 113

RESULT 80  
PCT-US93-08808-5  
Sequence 5, Application PC/TUS9308808  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08808  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESO, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-072  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
OTHER INFORMATION: /label= hop1-MATURE  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION:  
PCT-US93-08808-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHPKPCCAPTOLNAIS 20  
DB 94 INPETHPKPCCAPTOLNAIS 113

RESULT 81  
PCT-US93-08885-5  
Sequence 5, Application PC/TUS9308885  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US93/08885  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESQ. ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-074  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= hnp1-MATURE  
PCT-US93-08885-5

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
Db 94 INPETHKPCAPTOLNALS 113

RESULT 82  
PCT-US94-13181-10  
Sequence 10, Application PC/TUS9413181  
GENERAL INFORMATION:  
APPLICANT: GENETICS INSTITUTE, INC.  
TITLE OF INVENTION: MUTANTS OF BONE MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 12  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Genetics Institute, Inc - Legal Affairs  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/13181  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/163,877  
FILING DATE: December 7, 1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lazar, Steven R.  
REGISTRATION NUMBER: 32,618  
REFERENCE/DOCKET NUMBER: GI 5219-PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617 498-8260  
TELEFAX: 617 876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US94-13181-10

Query Match 100.0%; Score 111; DB 5; Length 139;  
Best Local Similarity 100.0%; Pred. No. 7.5e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
Db 94 INPETHKPCAPTOLNALS 113

RESULT 83  
US-08-621-803-249  
Sequence 249, Application US/08621803  
Patent No. 5851802  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
FUSION PROTEINS AND BPI-DERIVED PEPTIDES  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gershtein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 249:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 161 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-249

Query Match 100.0%; Score 111; DB 2; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8.7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
Db 116 INPETHKPCAPTOLNALS 135

RESULT 84  
US-09-271-970-2  
Sequence 2, Application US/09271970  
Patent No. 6242219  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01

CURRENT APPLICATION NUMBER: US/09/271,970  
CURRENT FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 2  
LENGTH: 161  
TYPE: PRT  
ORGANISM: Human  
US-09-271-970-2

Query Match 100.0%; Score 111; DB 3; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8,7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 85  
US-09-217-352-249  
Sequence 249, Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 249:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 161 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-249

Query Match 100.0%; Score 111; DB 3; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8,7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 86  
US-09-760-397-2

Sequence 2, Application US/09760397  
Patent No. 6500648  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/11941US01  
CURRENT APPLICATION NUMBER: US/09/760,397  
CURRENT FILING DATE: 2001-01-12  
PRIOR APPLICATION NUMBER: 09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 2  
LENGTH: 161  
TYPE: PRT  
ORGANISM: Human  
US-09-760-397-2

Query Match 100.0%; Score 111; DB 4; Length 161;  
Best Local Similarity 100.0%; Pred. No. 8,7e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 116 INPETHKPCCAPTOLNAIS 135

RESULT 87  
US-07-841-646-9  
Sequence 9, Application US/07841646  
Patent No. 5266683  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374

FILED DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-9

Query Match 100.0%; Score 111; DB 1; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9.1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQOLN1S 20  
DB 124 INPETHKPCAPQOLN1S 143

RESULT 88  
US-08-147-023-9  
Sequence 9, Application US/08147023  
Patent No. 5468845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 350  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-9

Query Match 100.0%; Score 111; DB 1; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9.1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQOLN1S 20

Db 124 INPETHKPCCAPTQJLNHIS 143

RESULT 89  
US-08-447-570-9  
Sequence 9, Application US/08447570  
Patent No. 5714569

GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVAL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-9

Query Match 100.0%; Score 111; DB 1; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9,1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQJLNHIS 20  
Db 124 INPETHKPCCAPTQJLNHIS 143

RESULT 90  
US-08-449-700-9  
Sequence 9, Application US/08449700  
Patent No. 5863758

GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVAL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990



PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-9

Query Match 100.0%; Score 111; DB 2; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9, 1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNALS 20  
DB 124 INPETHKPCCAPTOLNALS 143

RESULT 91  
US-08-449-699A-9  
Sequence 9, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STR-001CP6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-699A-9

Query Match 100.0%; Score 111; DB 2; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9, 1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 INPETHKPCCAPTOLNALS 20  
DB 124 INPETHKPCCAPTOLNALS 143

RESULT 92  
US-09-148-925C-9  
Sequence 9, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-SEP-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865

FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STX-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /PRODUCT="OPIA"  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-09-148-925C-9  
Query Match 100.0%; Score 111; DB 4; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9.1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHKPCAPTOLNAIS 20  
DB 124 INPETHKPCAPTOLNAIS 143  
RESULT 93  
US-08-957-425-9  
Sequence 9, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET

CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-OCT-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-08-957-425-9  
Query Match 100.0%; Score 111; DB 4; Length 169;  
Best Local Similarity 100.0%; Pred. No. 9.1e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHKPCAPTOLNAIS 20  
DB 124 INPETHKPCAPTOLNAIS 143  
RESULT 94  
US-09-271-970-8

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; Sequence 8, Application US/09271970
; Patent No. 6242219
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Gavitt, Patrick D.
; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production
; FILE REFERENCE: 1103/11041US01
; CURRENT APPLICATION NUMBER: US/09/271,970
; CURRENT FILING DATE: 1999-03-18
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 178
; TYPE: PRT
; ORGANISM: Human
US-09-271-970-8

Query Match          100.0%; Score 111; DB 3; Length 178;
Best Local Similarity 100.0%; Pred. No. 9.6e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 95
US-09-760-397-8
; Sequence 8, Application US/09760397
; Patent No. 6500648
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; APPLICANT: Gavitt, Patrick D.
; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production
; FILE REFERENCE: 1103/11041US01
; CURRENT APPLICATION NUMBER: US/09/760,397
; CURRENT FILING DATE: 2001-01-12
; PRIOR APPLICATION NUMBER: 09/271,970
; PRIOR FILING DATE: 1999-03-18
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 8
; LENGTH: 178
; TYPE: PRT
; ORGANISM: Human
US-09-760-397-8

Query Match          100.0%; Score 111; DB 4; Length 178;
Best Local Similarity 100.0%; Pred. No. 9.6e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 96
US-08-621-803-257
; Sequence 257, Application US/08621803
; Patent No. 5851802
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
; TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
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MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/621,803
FILING DATE: 22-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Borun, Michael F.
REGISTRATION NUMBER: 25,447
REFERENCE/DOCKET NUMBER: 27129/33199
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 257:
SEQUENCE CHARACTERISTICS:
LENGTH: 179 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-621-803-257

Query Match          100.0%; Score 111; DB 2; Length 179;
Best Local Similarity 100.0%; Pred. No. 9.6e-08;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
Db 116 INPETHKPCCAPTOLNAIS 135

RESULT 97
US-08-621-803-261
; Sequence 261, Application US/08621803
; Patent No. 5851802
; GENERAL INFORMATION:
; APPLICANT: Better, Marc D.
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of
; TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/621,803
; FILING DATE: 22-MAR-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Borun, Michael F.
; REGISTRATION NUMBER: 25,447
; REFERENCE/DOCKET NUMBER: 27129/33199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 261:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 179 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-621-803-261

Query Match          100.0%; Score 111; DB 2; Length 179;
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Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTOLNLAIS 20  
Db 116 INPETHKPCCAPTOLNLAIS 135

RESULT 98  
US-09-217-352-257  
Sequence 257, Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 257:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-257

Query Match 100.0%; Score 111; DB 3; Length 179;  
Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNLAIS 20  
Db 116 INPETHKPCCAPTOLNLAIS 135

RESULT 99  
US-09-217-352-261  
Sequence 261, Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago

STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 261:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-261

Query Match 100.0%; Score 111; DB 3; Length 179;  
Best Local Similarity 100.0%; Pred. No. 9.6e-08;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNLAIS 20  
Db 116 INPETHKPCCAPTOLNLAIS 135

RESULT 100  
US-09-271-970-14  
Sequence 14, Application US/09271970  
Patent No. 6242219  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/11041US01  
CURRENT APPLICATION NUMBER: US/09/271,970  
CURRENT FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 14  
LENGTH: 190  
TYPE: PRT  
ORGANISM: Human  
US-09-271-970-14

Query Match 100.0%; Score 111; DB 3; Length 190;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNLAIS 20  
Db 116 INPETHKPCCAPTOLNLAIS 135

RESULT 101  
US-09-760-397-14  
Sequence 14, Application US/09760397  
Patent No. 6500648  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.

APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01  
CURRENT APPLICATION NUMBER: US/09/760,397  
CURRENT FILING DATE: 2001-01-12  
PRIOR APPLICATION NUMBER: 09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO: 14  
LENGTH: 190  
TYPE: PRT  
ORGANISM: Human  
US-09-760-397-14

Query Match 100.0%; Score 111; DB 4; Length 190;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPQTLNLAIS 20  
Db 116 INPETHKPCAPQTLNLAIS 135

RESULT 102  
US-08-621-803-255  
Sequence 255, Application US/08621803  
Patent No. 5851802  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 255:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 194 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-255

Query Match 100.0%; Score 111; DB 2; Length 194;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPQTLNLAIS 20  
Db 116 INPETHKPCAPQTLNLAIS 135

RESULT 103  
US-09-217-352-255  
Sequence 255, Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 255:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 194 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-255

Query Match 100.0%; Score 111; DB 3; Length 194;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPQTLNLAIS 20  
Db 116 INPETHKPCAPQTLNLAIS 135

RESULT 104  
US-08-621-803-263  
Sequence 263, Application US/08621803  
Patent No. 5851802  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 263:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 195 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-621-803-263

Query Match 100.0%; Score 111; DB 2; Length 195;  
Best Local Similarity 100.0%; Pred. No. 1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

CY 1 INPETHPCCAPTOLNAIS 20  
DB 116 INPETHPCCAPTOLNAIS 135

RESULT 105  
US-09-217-352-263  
Sequence 263 Application US/09217352  
Patent No. 6274344  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
TITLE OF INVENTION: Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/217,352  
FILING DATE:  
PRIOR APPLICATION DATA:  
PRIOR APPLICATION NUMBER: 08/621,803  
FILING DATE: 22-MAR-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 263:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 195 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-217-352-263

Query Match 100.0%; Score 111; DB 3; Length 195;  
Best Local Similarity 100.0%; Pred. No. 1e-07;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

CY 1 INPETHPCCAPTOLNAIS 20  
DB 116 INPETHPCCAPTOLNAIS 135

RESULT 106  
US-07-841-646-11  
Sequence 11, Application US/07841646  
Patent No. 526683  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSER: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342

FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-11

Query Match 100.0%; Score 111; DB 1; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 272 INPETHKPCCAPTOLNALS 291

RESULT 107  
US-08-147-023-11  
Sequence 11, Application US/08147023  
Patent No. 5468845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849

FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-11

Query Match 100.0%; Score 111; DB 1; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 272 INPETHKPCCAPTOLNALS 291

RESULT 108  
US-08-447-570-11  
Sequence 11, Application US/08447570  
Patent No. 5714589  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.

ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-11

Query Match 100.0%; Score 111; DB 1; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYPCAPTOJN1S 20  
Db 272 INPETYPCAPTOJN1S 291  
RESULT 109  
US-08-449-700-11  
Sequence 11, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: KOBERSAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989



PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CB6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-11

Query Match 100.0%; Score 111; DB 2; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
DB 272 INPETHKPCAPTOLNALS 291

RESULT 110  
US-08-449-699A-11  
Sequence 11, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STR-001CB6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
US-08-449-699A-11

Query Match 100.0%; Score 111; DB 2; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPTOLNALS 20  
DB 272 INPETHKPCAPTOLNALS 291

RESULT 111  
US-09-148-925C-11  
Sequence 11, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-SEP-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988

APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /product="OPIB"  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-09-148-925C-11  
Query Match 100.0%; Score 111; DB 4; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCPCAPTLNLAIS 20  
DB 272 INPETHPCPCAPTLNLAIS 291  
RESULT 112  
US-08-957-425-11  
Sequence 11, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
ROBER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HIRWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162

FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,513  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-08-957-425-11  
Query Match 100.0%; Score 111; DB 4; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPCPCAPTLNLAIS 20  
DB 272 INPETHPCPCAPTLNLAIS 291  
RESULT 113  
US-07-764-731B-10  
Sequence 10, Application US/07764731B  
Patent No. 5366875  
GENERAL INFORMATION:  
APPLICANT: Rosen, Vicki A.  
APPLICANT: Wang, Elizabeth A.  
APPLICANT: Mooney, John M.  
TITLE OF INVENTION: Methods for Producing BMP-7 Proteins  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/764,731B  
FILING DATE: 19910924  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Kapinos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: G15159B  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-876-1170  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 400 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-764-731B-10

Query Match 100.0%; Score 111; DB 1; Length 400;  
Best Local Similarity 100.0%; Pred. NO. 2.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
Db 355 INPETHKPCCAPTQNLN1S 374

RESULT 114  
US-07-841-646-15  
Sequence 15, Application US/07841646  
Patent No. 5266583  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER, EDMOND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-15

Query Match 100.0%; Score 111; DB 1; Length 408;  
Best Local Similarity 100.0%; Pred. NO. 2.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
Db 363 INPETHKPCCAPTQNLN1S 382

RESULT 115  
US-08-147-023-15  
Sequence 15, Application US/08147023  
Patent No. 546845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-15

Query Match 100.0%; Score 111; DB 1; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2,2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 363 INPETHKPCCAPTOLNAIS 382

RESULT 116  
US-08-447-570-15  
Sequence 15, Application US/08447570  
Patent No. 5714589  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-15

Query Match 100.0%; Score 111; DB 1; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2,2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPEVPRKPCCAPTQMAIS 20  
Db 363 INPEVPRKPCCAPTQMAIS 382

RESULT 117  
US-08-449-700-15  
Sequence 15, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-15

Query Match 100.0%; Score 111; DB 2; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2,2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPEVPRKPCCAPTQMAIS 20  
Db 363 INPEVPRKPCCAPTQMAIS 382

RESULT 118  
US-08-449-699A-15  
Sequence 15, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-001CP6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-699A-15

Query Match 100.0%; Score 111; DB 2; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 363 INPETHKPCCAPTOLNAIS 382

RESULT 119  
US-09-148-925C-15  
Sequence 15, Application US/09148925C  
Patent No. 655195  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-SEP-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990

APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /product="OP1D"  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-09-148-925C-15

Query Match 100.0%; Score 111; DB 4; Length 408;  
Best Local Similarity 100.0%; Pred. No. 2.2e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 363 INPETHKPCCAPTOLNAIS 382

RESULT 120  
US-08-957-425-15  
Sequence 15, Application US/08957425  
Patent No. 658638  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON

Page 51

Patent No. 5266683  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKANYAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUBER, DAVID C.  
APPLICANT: PANG, ROY H.U.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.23  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,629

REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 122  
US-07-901-703-2  
Sequence 2, Application US/07901703  
Patent No. 534654  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZAKAYNAK, ENGIN  
TITLE OF INVENTION: PROSTHETIC DEVICES HAVING ENHANCED  
TITLE OF INVENTION: OSTEOGENIC PROPERTIES  
NUMBER OF SEQUENCES: 22  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: EXCHANGE PLACE, 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/901,703  
FILING DATE: 19920616  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, ESQ, EDWARD R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-057  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-901-703-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 123

US-07-539-756-4  
Sequence 4, Application US/07539756  
Patent No. 5364839  
GENERAL INFORMATION:  
APPLICANT: GERHART, TOBIN N.  
APPLICANT: WANG, ELIZABETH A.  
APPLICANT: KATZ, MARY JO  
TITLE OF INVENTION: OSTEOINDUCTIVE PHARMACEUTICAL  
TITLE OF INVENTION: FORMULATIONS  
NUMBER OF SEQUENCES: 4  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: GENETICS INSTITUTE, INC.  
STREET: LEGAL AFFAIRS - 87 CAMBRIDGE PARK DRIVE  
CITY: CAMBRIDGE  
STATE: MASSACHUSETTS  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/539,756  
FILING DATE: 19900618  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: MCDANIELS, PATRICIA A.  
REGISTRATION NUMBER: 33,194  
REFERENCE/DOCKET NUMBER: GI 5172  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 876-1170 X405  
TELEFAX: (617) 876-5851  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-539-756-4

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 124  
US-08-147-023-2  
Sequence 2, Application US/08147023  
Patent No. 5468845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZAKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS



SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-147-023-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNLS 20  
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DB 386 INPETHKPCAPQNLNLS 405

RESULT 125  
US-08-206-864-2  
Sequence 2, Application US/08206864  
Patent No. 5610021  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: JONES, WILLIAM K  
APPLICANT: TUCKER, RONALD F  
APPLICANT: OPPERMANN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR  
TITLE OF INVENTION: RECOMBINANT OSTEOGENIC PROTEIN PRODUCTION  
NUMBER OF SEQUENCES: 6  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR/CREATIVE BIOMOLECULES,  
ADDRESS: INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/206,864  
FILING DATE:  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/027,070  
FILING DATE: 04-MAR-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-096  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-206-864-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCAPQNLNLS 20  
|||||  
DB 386 INPETHKPCAPQNLNLS 405

RESULT 126  
US-08-278-729A-17  
Sequence 17, Application US/08278729A  
Patent No. 5650276  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMANN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.

APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,729A  
FILING DATE: 20-JUL-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-278-729A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 127  
US-08-480-528A-4  
Sequence 4, Application US/08480528A  
Patent No. 5652118  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/480,528A  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:

NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-076FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-480-528A-4

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 128  
US-08-479-666-4  
Sequence 4, Application US/08479666  
Patent No. 5652337  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/479,666  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-076DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-479-666-4

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20

Tue Oct 26 09:17:06 2004

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Page 55

Db 386 INPETYKPCCAPTQNLNALS 405

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RESULT 129
US-08-155-343A-17
; Sequence 17, Application US/08155343A
; Patent No. 5656593
GENERAL INFORMATION:
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: RUEGER, DAVID C.
APPLICANT: OPPERMAN, HERMAN
APPLICANT: COHEN, CHARLES M.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE
REGENERATION.
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
STREET: 45 SOUTH STREET
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/155,343A
FILING DATE: 15-NOV-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: FENTON Esq., GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-0677M
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7560
TELEFAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-155-343A-17

Query Match 100.0%; Score 111; DB 1; Length 431;
Best Local Similarity 100.0%; Pred. No. 2,3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNALS 20
Db 386 INPETYKPCCAPTQNLNALS 405

RESULT 130
US-08-406-672-17
; Sequence 17, Application US/08406672
; Patent No. 56744844
GENERAL INFORMATION:
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: COHEN, CHARLES M.
APPLICANT: OPPERMAN, HERMAN
APPLICANT: OZKATNAK, ENGIN
APPLICANT: RUEGER, DAVID C.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
STREET: 45 SOUTH STREET
```

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; CITY: HOPKINTON
; STATE: MA
; COUNTRY: USA
; ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/406,672
FILING DATE: 20-MAR-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 752,857
FILING DATE: 30-AUG-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 667,274
FILING DATE: 11-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: FENTON Esq., GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-060CN
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7560
TELEFAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-406-672-17

Query Match 100.0%; Score 111; DB 1; Length 431;
Best Local Similarity 100.0%; Pred. No. 2,3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLNALS 20
Db 386 INPETYKPCCAPTQNLNALS 405

RESULT 131
US-08-643-563A-17
; Sequence 17, Application US/08643563A
; Patent No. 5707810
GENERAL INFORMATION:
APPLICANT: SMART, JOHN
APPLICANT: OPPERMAN, HERMAN
APPLICANT: OZKATNAK, ENGIN
APPLICANT: KUBERASAMPATH, THANGAVEL
APPLICANT: RUEGER, DAVID C.
APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
STREET: 45 SOUTH STREET
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/643,563A
FILING DATE: 06-MAY-1996
CLASSIFICATION: 435
```

ATTORNEY/AGENT INFORMATION:  
NAME: TWOMEY ESC, MICHAEL J.  
REGISTRATION NUMBER: 38,349  
REFERENCE/DOCKET NUMBER: CRP-058CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-643-563A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 132  
US-08-447-570-2  
Sequence 2, Application US/08447570  
Patent No. 5714589  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZZAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HIRWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 536  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-447-570-2

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 133  
US-08-643-763A-17  
Sequence 17, Application US/08643763A  
Patent No. 573878  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,763A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-643-763A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 386 INPETHKPCCAPTQLNIAIS 405

RESULT 134  
US-08-462-623-17  
Sequence 17, Application US/08462623  
Patent No. 5739107  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: ULCERS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/462,623  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids

TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-462-623-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 386 INPETHKPCCAPTQLNIAIS 405

RESULT 135  
US-08-451-953A-17  
Sequence 17, Application US/08451953A  
Patent No. 5741641  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMANN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/451,953A  
FILING DATE: 26-MAY-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER Esq., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-451-953A-17

Query Match 100.0%; Score 111; DB 1; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNIAIS 20  
Db 386 INPETHKPCCAPTQLNIAIS 405

RESULT 136  
US-08-459-346-2  
Sequence 2, Application US/08459346  
Patent No. 5834179  
GENERAL INFORMATION:

APPLICANT: JONES, WILLIAM K  
APPLICANT: TUCKER, RONALD F  
APPLICANT: RUEGER, DAVID C  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
TITLE OF INVENTION: OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR/CREATIVE BIOMOLECULES,  
ADDRESS: INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,346  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/938,336  
FILING DATE: 08-AUG-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-081CP  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-459-346-2

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2, 3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 137  
US-08-445-468A-17  
Sequence 17, Application US/08445468A  
Patent No. 5849686  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,468A  
FILING DATE: 22-MAY-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-072FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7100  
FAX: (617) 248-7560  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-445-468A-17

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2, 3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 138  
US-08-901-200A-4  
Sequence 4, Application US/08901200A  
Patent No. 5854071  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/901,200A  
FILING DATE: 28-JUL-1997  
CLASSIFICATION: 530  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct124.ra1

Page 59

REFERENCE/DOCKET NUMBER: CRP-076DV2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-901-200A-4

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||||  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 139  
US-08-481-337A-10  
Sequence 10, Application US/08481337A  
Patent No. 5863738  
GENERAL INFORMATION:  
APPLICANT: TEN DUKE, Peter  
APPLICANT: HELDIN, Carl-Henrik  
APPLICANT: MIYAZONO, Kohji  
APPLICANT: SAMPATH, Kuber T.  
TITLE OF INVENTION: Morphogenic Protein-Specific Cell  
TITLE OF INVENTION: Surface Receptors and Uses Therefor  
NUMBER OF SEQUENCES: 18  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Testa, Hurwitz & Thibault  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/481,337A  
FILING DATE: 02-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, Thomas C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-097CP2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-481-337A-10

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
|||||  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 140  
US-08-449-700-2  
Sequence 2, Application US/08449700  
Patent No. 5863758  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OKAYAKI, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988

ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-2

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAIIS 20  
DB 386 INPETHKPCCAPTOINAIIS 405

RESULT 141  
US-07-989-847-6  
Sequence 6, Application US/07989847  
Patent No. 5866364  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
ATTORNEY/AGENT INFORMATION:  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
TITLE OF INVENTION: Heterodimers, Compositions and Methods of Use.  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESS: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/989,847  
FILING DATE:  
CLASSIFICATION: 436  
ATTORNEY/AGENT INFORMATION:  
NAME: Kapihos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-5192B  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-876-1170  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-989-847-6

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAIIS 20  
DB 386 INPETHKPCCAPTOINAIIS 405

RESULT 142  
US-08-449-699A-2  
Sequence 2, Application US/08449699A  
Patent No. 5958441  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OKAYAK, ENGIN  
APPLICANT: KUBERAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOINAIIS 20  
DB 386 INPETHKPCCAPTOINAIIS 405

RESULT 143  
US-08-696-268B-4  
Sequence 4, Application US/08696268B  
Patent No. 5968752  
GENERAL INFORMATION:  
APPLICANT: ICHIO, HIDEORI  
APPLICANT: NISHITOH, HIDEKI  
APPLICANT: SAWATH, KUBER T.  
TITLE OF INVENTION: NOVEL SIGNALING RECEPTOR FOR  
TITLE OF INVENTION: MORPHOGENIC PROTEINS  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESS:  
ADDRESS: Testa, Hurwitz & Thibault  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA



ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/696,268B  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, Thomas C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-117  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-696-268B-4

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 144  
US-08-461-397A-17  
Sequence 17, Application US/08461397A  
Patent No. 5972884  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARBET, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
TITLE OF INVENTION: PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,397A  
FILING DATE: 05-JUN-1995  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-074FW2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-461-397A-17

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 145  
US-08-912-088-17  
Sequence 17, Application US/08912088  
Patent No. 5994131  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/912,088  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/278,729  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CPFW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-912-088-17

Query Match 100.0%; Score 111; DB 2; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 146  
US-08-278-730A-17  
Sequence 17, Application US/08278730A  
Patent No. 6022653  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-ENRICHED DIETARY COMPOSITION  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/278,730A  
FILING DATE: 20-JULY-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-071FW  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-278-730A-17  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Cy 1 INPETHKPCCAPTQLNLAIS 20  
Db 386 INPETHKPCCAPTQLNLAIS 405  
RESULT 147  
US-08-458-811-2  
Sequence 2, Application US/08458811  
Patent No. 6027743  
GENERAL INFORMATION:  
APPLICANT: KHOURI, ROGER K.  
APPLICANT: KUMPATH, KUBER T.  
APPLICANT: RUEGER, DAVID C.  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT  
TITLE OF INVENTION: BODY PARTS  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/458,811  
FILING DATE:  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-108  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-458-811-2  
Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Cy 1 INPETHKPCCAPTQLNLAIS 20  
Db 386 INPETHKPCCAPTQLNLAIS 405  
RESULT 148  
US-08-889-419-2  
Sequence 2, Application US/08889419  
Patent No. 6071708  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K.  
APPLICANT: TUCKER, RONALD F.  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
TITLE OF INVENTION: OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
ADDRESS: Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/889,419  
FILING DATE: 08-JUL-1997  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/459,346  
FILING DATE: 02-JUN-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-081DVON  
INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-889-419-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNLAIS 20  
DB 386 INPETHKPCCAPTQLNLAIS 405

RESULT 149  
US-08-445-467-17  
Sequence 17, Application US/08445467  
Patent No. 6077823  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: OZKANAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN-INDUCED MODULATION OF  
TITLE OF INVENTION: INFLAMMATORY RESPONSE  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,467  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/165,511  
FILING DATE: US/07/938,336  
APPLICATION NUMBER: US/07/938,336  
FILING DATE:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESO, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-059CC3.APP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

US-08-445-467-17

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNLAIS 20  
DB 386 INPETHKPCCAPTQLNLAIS 405

RESULT 150  
US-08-480-515A-17  
Sequence 17, Application US/08480515A  
Patent No. 6090776  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF ORGAN TRANSPLANTS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/480,515A  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-068FWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-480-515A-17

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNLAIS 20  
DB 386 INPETHKPCCAPTQLNLAIS 405

RESULT 151  
US-08-459-129-2  
Sequence 2, Application US/08459129  
Patent No. 6110482  
GENERAL INFORMATION:  
APPLICANT: KHOURI, ROGER K.  
APPLICANT: SAMPATH, KUBER T.  
APPLICANT: RUEGER, DAVID C.  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT

TITLE OF INVENTION: BODY PARTS  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,129  
FILING DATE:  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-101  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7000  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-459-129-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
|||||  
DB 386 INPETHKPCCAPTQNLNALS 405

RESULT 152  
US-09-219-391-4  
Sequence 4, Application US/09219391  
Patent No. 6135383  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANCAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/219,391  
FILING DATE:

CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/301,200  
FILING DATE: 28-JUL-1997  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-076DV2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-219-391-4

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
|||||  
DB 386 INPETHKPCCAPTQNLNALS 405

RESULT 153  
US-08-469-411-6  
Sequence 6, Application US/08469411  
Patent No. 6190880  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
Molman, Neil M.  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
Heterodimers, Compositions and Methods of Use.  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/469,411  
FILING DATE: 06-Jun-1995  
CLASSIFICATION: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Kapinos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-5192B-CON  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-498-8622  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 6:  
US-08-469-411-6

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 154  
US-09-019-339B-2  
Sequence 2, Application US/09019339B  
Patent No. 6281195  
GENERAL INFORMATION:  
APPLICANT: RUEGER, David C  
APPLICANT: TUCKER, Marjorie M  
TITLE OF INVENTION: MATRIX-FREE OSTEOGENIC DEVICES, IMPLANTS AND  
METHODS OF USE THEREOF  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: James F. Haley, Jr., Esq. c/o FISH & NEAVE  
STREET: 1251 Avenue of the Americas  
CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10020  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/019,339B  
FILING DATE: February 5, 1998  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: James F. Haley, Jr., Esq.  
REGISTRATION NUMBER: 27,794  
REFERENCE/DOCKET NUMBER: CRP-147  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212)596-9000  
TELEFAX: (212)596-9090  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-019-339B-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 155  
US-09-170-936-17  
Sequence 17, Application US/09170936  
Patent No. 6333312  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H. L.  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR

NUMBER OF INVENTION: INCREASE BONE MASS IN METABOLIC BONE DISEASES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/170,936  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/432,883  
FILING DATE: 2-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-060CPFWC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-170-936-17

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 156  
US-08-402-542-2  
Sequence 2, Application US/08402542  
Patent No. 6395683  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
APPLICANT: TUCKER, RONALD F  
APPLICANT: RUEGER, DAVID C  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF PATTERN  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: PATENT ADMINISTRATOR/CREATIVE BIOMOLECULES,  
INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/402,542  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/040,510  
FILING DATE:  
APPLICATION NUMBER: US/08/029,335  
FILING DATE: 04-MAR-1993  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/971,091  
FILING DATE: 03-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/946,235  
FILING DATE: 16-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/938,336  
FILING DATE: 08-AUG-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/923,780  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDWARD R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-081CP  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-402-542-2

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 386 INPETHKPCCAPTQNLNLS 405

RESULT 157  
US-08-461-113-17  
Sequence 17, Application US/08461113  
Patent No. 6399569  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMUTHI, THANGAVEL  
APPLICANT: RUEBER, DAVID C.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
TITLE OF INVENTION: PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE:  
CLASSIFICATION: 514

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON BSG, GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-461-113-17

Query Match 100.0%; Score 111; DB 3; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNLS 20  
Db 386 INPETHKPCCAPTQNLNLS 405

RESULT 158  
US-08-828-281B-5  
Sequence 5, Application US/08828281B  
Patent No. 6407060  
GENERAL INFORMATION:  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: FINKLESTEIN, Seth P.  
TITLE OF INVENTION: METHODS FOR ENHANCING FUNCTIONAL  
TITLE OF INVENTION: RECOVERY FOLLOWING CENTRAL NERVOUS SYSTEM ISCHEMIA OR  
TITLE OF INVENTION: TRAUMA  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/828,281B  
FILING DATE:  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON, GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-069CP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-828-281B-5

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.ra1

Page 67

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 159

US-09-887-901-2  
Sequence 2, Application US/09887901  
Patent No. 6426332

GENERAL INFORMATION:

APPLICANT: RUEGER, David C  
TUCKER, Marjorie M

TITLE OF INVENTION: METHODS OF USE THEREOF  
NUMBER OF SEQUENCES: 8

CORRESPONDENCE ADDRESSES:  
ADDRESSEE: James F. Haley, Jr., Esq. c/o FISH & NEAVE  
STREET: 1251 Avenue of the Americas  
CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10020

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.30 (EPO)  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/887,901  
FILING DATE: 22-Jun-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/019,339  
FILING DATE: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: James F. Haley, Jr., Esq.  
REGISTRATION NUMBER: 27,794  
REFERENCE/DOCKET NUMBER: CRP-147

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212)596-9000  
TELEFAX: (212)596-9090

INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-09-887-901-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 160

US-08-456-033-17  
Sequence 17, Application US/08456033  
Patent No. 6495513

GENERAL INFORMATION:

APPLICANT: RUEGER, David C.  
APPLICANT: KUBERASAMPATH, THANGAVEL

APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN

APPLICANT: PANG, ROY H.I.  
APPLICANT: COHEN, CHARLES M.

TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
REPAIR.  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
REPAIR.  
NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/456,033  
FILING DATE: 31-MAY-1995  
CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-070DV

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-6951  
TELEFAX: (508) 435-6951

INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
US-08-456-033-17

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 386 INPETHKPCCAPTOLNAIS 405

RESULT 161

US-08-643-321-16  
Sequence 16, Application US/08643321  
Patent No. 6498142

GENERAL INFORMATION:

APPLICANT: SAMPATH, KUBER T.  
APPLICANT: COHEN, CHARLES M.

TITLE OF INVENTION: MORPHOGEN TREATMENT FOR CHRONIC  
TITLE OF INVENTION: RENAL FAILURE  
NUMBER OF SEQUENCES: 31

CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,321  
FILING DATE: 514

ATTORNEY/AGENT INFORMATION:

NAME: TWOMEY, MICHAEL J  
REGISTRATION NUMBER: 38,349

REFERENCE/DOCKET NUMBER: CRP-118  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 16:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-643-321-16

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNLAIS 20  
DB 386 INPETHKPCCAPTQLNLAIS 405

RESULT 162  
US-08-938-622-2  
Sequence 2, Application US/08938622  
Patent No. 6506729  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: SAMPATH, KUBER T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TREATMENT AND PREVENTION OF PARKINSON'S DISEASE  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HUMWITZ &  
THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/938,622  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-128  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7013  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-938-622-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNLAIS 20  
DB 386 INPETHKPCCAPTQLNLAIS 405

RESULT 163  
US-09-148-925C-2

Sequence 2, Application US/09148925C  
Patent No. 6551995  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKANAK, ENGIN  
KUBERASAMPAH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HUMWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-SEP-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3



TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /Product=Opl-pp  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-09-148-925C-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 386 INPETYKPCCAPTOLNAIS 405

RESULT 164  
US-08-957-425-2  
Sequence 2, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HUMWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICANT: OPPERMANN, HERMANN  
FILING DATE: 24-OCT-1997  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JUN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920

FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-08-957-425-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 386 INPETYKPCCAPTOLNAIS 405

RESULT 165  
US-09-780-601A-6  
Sequence 6, Application US/09780601A  
Patent No. 6593109  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/780,601A  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/469,411  
FILING DATE: 06-Jun-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: Karpinos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-5192B-CON  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-876-5851  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-780-601A-6

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 166  
US-08-448-371A-10  
Sequence 10, Application US/08448371A  
Patent No. 6632618

GENERAL INFORMATION:  
APPLICANT: TEN DUKE, Peter  
APPLICANT: HELDIN, Carl-Henrik  
APPLICANT: MIYAZONO, Kohel  
APPLICANT: SAMPATH, Kuber T.  
TITLE OF INVENTION: Morphogenic Protein-Specific Cell  
NUMBER OF SEQUENCES: 18  
CORRESPONDENCE ADDRESS:  
ADDRESS: Testa, Hurwitz & Thibault  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentln Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/448,371A  
FILING DATE:

CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: WEIERS, Thomas C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-097CPI  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-448-371A-10

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 167  
US-09-374-958C-39  
Sequence 39, Application US/09374958C  
Patent No. 6677432  
GENERAL INFORMATION:

APPLICANT: Striker Corporation  
TITLE OF INVENTION: Modified Proteins and DNAs of the TGF-beta Superfamily, including  
FILE REFERENCE: STX-076  
CURRENT APPLICATION NUMBER: US/09/374,958C  
CURRENT FILING DATE: 1999-08-16  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: Patentln version 2.0  
SEQ ID NO 39  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: Morphogenic protein OPI  
US-09-374-958C-39

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 168  
US-09-672-224A-2  
Sequence 2, Application US/09672224A  
Patent No. 6696410

GENERAL INFORMATION:  
APPLICANT: LEE, JOHN C.  
APPLICANT: YEH, LEE-CHUAN C.  
TITLE OF INVENTION: COMPOSITIONS AND THERAPEUTIC METHODS USING MORPHOGENIC  
FILE REFERENCE: STX-4  
CURRENT APPLICATION NUMBER: US/09/672,224A  
CURRENT FILING DATE: 2000-09-27  
PRIOR APPLICATION NUMBER: 60/156,261  
PRIOR FILING DATE: 1999-09-27  
NUMBER OF SEQ ID NOS: 14  
SOFTWARE: Patentln Ver. 2.1  
SEQ ID NO 2  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-672-224A-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 386 INPETHKPCCAPTOLN1S 405

RESULT 169  
US-08-937-755-2  
Sequence 2, Application US/08937755  
Patent No. 6723698

GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: SAMPATH, KUBER T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TREATMENT OF MOTOR NEURON INJURY AND NEUROPATHY  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ &  
THIBAUT, LLP  
STREET: 125 HIGH STREET

CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/937,755  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-155  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7100  
TELEFAX: (617) 248-7103  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-937-755-2

Query Match 100.0%; Score 111; DB 4; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 170  
PCT-US90-07654-4  
Sequence 4, Application PC/TUS9007654  
GENERAL INFORMATION:  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 4  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US90/07654  
FILING DATE: 19901228  
CLASSIFICATION: 156  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, ESQ. EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001PS  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 627/248-7100  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids

TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US90-07654-4

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 171  
PCT-US91-07635-2  
Sequence 2, Application PC/TUS9107635  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US91/07635  
FILING DATE: 19911018  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, ESQ. EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-056PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US91-07635-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQLNALS 20  
DB 386 INPETHKPCCAPTQLNALS 405

RESULT 172  
PCT-US92-01968-17  
Sequence 17, Application PC/TUS9201968  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: PANG, ROY HL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: RUEGER, DAVID C

TITLE OF INVENTION: PROTEIN-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA HURWITZ & THIBEAULT  
STREET: EXCHANGE PLACE 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US92/01968  
FILING DATE: 19920311  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-052PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US92-01968-17

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNAIS 20  
DB 386 INPETHKPCCAPTQNAIS 405

RESULT 173  
PCT-US93-05446-2  
Sequence 2, Application PC/TUS9305446  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: PROSTHETIC DEVICES HAVING ENHANCED  
TITLE OF INVENTION: OSTEOGENIC PROPERTIES  
NUMBER OF SEQUENCES: 22  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Creative Biomolecules, Inc.  
STREET: 35 South Street  
CITY: Hopkinton  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/05446  
FILING DATE: 19930608  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R

REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-057  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-05446-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNAIS 20  
DB 386 INPETHKPCCAPTQNAIS 405

RESULT 174  
PCT-US93-07189-2  
Sequence 2, Application PC/TUS9307189  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
TITLE OF INVENTION: OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: INC.  
STREET: 35 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/07189  
FILING DATE: 19930729  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-081CP  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-07189-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNAIS 20  
DB 386 INPETHKPCCAPTQNAIS 405

RESULT 175  
PCT-US93-07190-17  
Sequence 17, Application PC/TUS9307190

```

GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-ENRICHED DIETARY COMPOSITION
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: CREATIVE BIOMOLECULES, INC.
STREET: 35 SOUTH STREET
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/07231
ATTORNEY/AGENT INFORMATION:
NAME: KELLEY, ROBIN D
REGISTRATION NUMBER: 34,637
REFERENCE/DOCKET NUMBER: CRP-071
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7100
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-07190-17

Query Match      100.0%; Score 111; DB 5; Length 431;
Best Local Similarity 100.0%; Pred. No. 2.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy      1 INPETHPKPCCAPTQLNLAIS 20
      ||||||||||||||||
Db      386 INPETHPKPCCAPTQLNLAIS 405

RESULT 176
PCT-US93-07231-17
Sequence 17, Application PC/TUS9307231
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND
REPAIR
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: CREATIVE BIOMOLECULES, INC.
STREET: 35 SOUTH STREET
CITY: HOPKINTON
STATE: MASSACHUSETTS
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/07231
ATTORNEY/AGENT INFORMATION:
NAME: KELLEY, ROBIN D
REGISTRATION NUMBER: 34,637
REFERENCE/DOCKET NUMBER: CRP-070
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7000
TELEFAX: 617/248-7100
```

```

INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-07231-17

Query Match      100.0%; Score 111; DB 5; Length 431;
Best Local Similarity 100.0%; Pred. No. 2.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy      1 INPETHPKPCCAPTQLNLAIS 20
      ||||||||||||||||
Db      386 INPETHPKPCCAPTQLNLAIS 405

RESULT 177
PCT-US93-08742-17
Sequence 17, Application PC/TUS9308742
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-INDUCED PERIODONTAL TISSUE REGENERATION
REPAIR
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: CREATIVE BIOMOLECULES, INC.
STREET: 45 SOUTH STREET
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/08742
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
ATTORNEY/AGENT INFORMATION:
NAME: KELLEY ESO, ROBIN D.
REGISTRATION NUMBER: 34,637
REFERENCE/DOCKET NUMBER: CRP-067
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7477
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 431 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-08742-17

Query Match      100.0%; Score 111; DB 5; Length 431;
Best Local Similarity 100.0%; Pred. No. 2.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy      1 INPETHPKPCCAPTQLNLAIS 20
      ||||||||||||||||
Db      386 INPETHPKPCCAPTQLNLAIS 405

RESULT 178
PCT-US93-08808-17
Sequence 17, Application PC/TUS9308808
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION
```

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08808  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESQ, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-072  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-08808-17

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETYKPCCAPTQLNIAIS 20  
Db 386 INPETYKPCCAPTQLNIAIS 405

RESULT 179  
PCT-US93-08885-17  
Sequence 17 Application PC/TUS9308885  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: UICERS  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/08885  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY ESQ, ROBIN D.

REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-074  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7477  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-08885-17

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETYKPCCAPTQLNIAIS 20  
Db 386 INPETYKPCCAPTQLNIAIS 405

RESULT 180  
PCT-US93-10520-4  
Sequence 4 Application PC/TUS9310520  
GENERAL INFORMATION:  
APPLICANT:  
TITLE OF INVENTION: OP3-INDUCED MORPHOGENESIS  
NUMBER OF SEQUENCES: 13  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US93/10520  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/753,059  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/922,813  
FILING DATE: 31-JUL-1992  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-076PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.ra1

Page 75

TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US93-10520-4

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLN1S 20  
Db 386 INPETYKPCCAPTOLN1S 405

RESULT 181  
PCT-US95-05467-10  
Sequence 10, Application PC/TUS9505467  
GENERAL INFORMATION:

APPLICANT:  
TITLE OF INVENTION: MORPHOGENIC PROTEIN-SPECIFIC CELL  
TITLE OF INVENTION: SURFACE RECEPTORS AND USES THEREFOR  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESS: THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US95/05467  
FILING DATE:

CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-097PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100

INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US95-05467-10

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLN1S 20  
Db 386 INPETYKPCCAPTOLN1S 405

RESULT 182  
PCT-US95-06724-2  
Sequence 2, Application PC/TUS9506724  
GENERAL INFORMATION:

APPLICANT:  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT  
TITLE OF INVENTION: BODY PARTS  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &

ADDRESSEE: THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US95/06724  
FILING DATE:

CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:

ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP101PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
PCT-US95-06724-2

Query Match 100.0%; Score 111; DB 5; Length 431;  
Best Local Similarity 100.0%; Pred. No. 2.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLN1S 20  
Db 386 INPETYKPCCAPTOLN1S 405

RESULT 183  
US-08-411-607A-3  
Sequence 3, Application US/08411607A  
Patent No. 594102

GENERAL INFORMATION:  
APPLICANT: HUDSON, PETER L.  
APPLICANT: ROSEN, CRAIG A.  
APPLICANT: HE, WEI WU  
TITLE OF INVENTION: PROSTATIC GROWTH FACTOR  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,  
ADDRESSEE: STEWART & OLSTEIN  
STREET: 6 BECKER FARM ROAD  
CITY: ROSELAND  
STATE: NJ

COUNTRY: US  
ZIP: 07068

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/411,607A  
FILING DATE: 11-APR-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: FERRARO, GREGORY D.  
REGISTRATION NUMBER: 36,134  
REFERENCE/DOCKET NUMBER: 325800-329

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 994-1700  
TELEFAX: (201) 994-1744  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 432 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-411-607A-3

Query Match 100.0%; Score 111; DB 2; Length 432;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 387 INPETHKPCCAPTOLNALS 406

RESULT 184  
US-09-361-741-3  
Sequence 3, Application US/09361741  
Patent No. 6500638  
GENERAL INFORMATION:  
APPLICANT: HUDSON, PETER L  
APPLICANT: ROSEN, CRAIG A  
APPLICANT: HE, WEI WU  
TITLE OF INVENTION: PROSTATIC GROWTH FACTOR  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,  
ADDRESSEE: STEWART & OLSTEIN  
STREET: 6 BECKER FARM ROAD  
CITY: ROSELAND  
STATE: NJ  
COUNTRY: US  
ZIP: 07068  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: IBM PC compatible  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/361,741  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/411,607  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: FERRARO, GREGORY D  
REGISTRATION NUMBER: 36,134  
REFERENCE/DOCKET NUMBER: 325800-329  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 994-1700  
TELEFAX: (201) 994-1744  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 432 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-361-741-3

Query Match 100.0%; Score 111; DB 4; Length 432;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 387 INPETHKPCCAPTOLNALS 406

DB 387 INPETHKPCCAPTOLNALS 406

RESULT 185  
US-09-461-418-3  
Sequence 3, Application US/09461418  
Patent No. 6521227  
GENERAL INFORMATION:  
APPLICANT: HUDSON, PETER L  
APPLICANT: ROSEN, CRAIG A  
APPLICANT: HE, WEI WU  
TITLE OF INVENTION: PROSTATIC GROWTH FACTOR  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,  
ADDRESSEE: STEWART & OLSTEIN  
STREET: 6 BECKER FARM ROAD  
CITY: ROSELAND  
STATE: NJ  
COUNTRY: US  
ZIP: 07068  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: IBM PC compatible  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/461,418  
FILING DATE: 16-Dec-1999  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/411,607A  
FILING DATE: 11-Apr-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FERRARO, GREGORY D  
REGISTRATION NUMBER: 36,134  
REFERENCE/DOCKET NUMBER: 325800-329  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 994-1700  
TELEFAX: (201) 994-1744  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 432 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 3:  
US-09-461-418-3

Query Match 100.0%; Score 111; DB 4; Length 432;  
Best Local Similarity 100.0%; Pred. No. 2,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 387 INPETHKPCCAPTOLNALS 406

RESULT 186  
US-07-841-646-13  
Sequence 13, Application US/07841646  
Patent No. 5266683  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYMAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT



STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/841,646  
FILING DATE: 19920221  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CIP-001CIP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: AMINO ACID  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-07-841-646-13

Query Match 100.0%; Score 111; DB 1; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2,6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCCAPTQLNALS 20  
DB 439 INPETHKPCCAPTQLNALS 458  
RESULT 187  
US-08-147-023-13  
Sequence 13, Application US/08147023  
Patent No. 5468845  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN  
APPLICANT: KUBERASAPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HIRWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/147,023  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613

;; FILING DATE: 17-OCT-1989  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 315,342  
;; FILING DATE: 23-FEB-1989  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 232,630  
;; FILING DATE: 15-AUG-1988  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 179,460  
;; FILING DATE: 08-APR-1988  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: PITCHER, EDMUND R.  
;; REGISTRATION NUMBER: 27,829  
;; REFERENCE/DOCKET NUMBER: CRP-001CP6  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 617/248-7000  
;; TELEFAX: 617/248-7100  
;; INFORMATION FOR SEQ ID NO: 13:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 484 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-08-147-023-13

Query Match 100.0%; Score 111; DB 1; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

CY 1 INPETHKPCCAPTQLNALIS 20  
Db 439 INPETHKPCCAPTQLNALIS 458

RESULT 188  
US-08-447-570-13  
; Sequence 13, Application US/08447570  
; Patent No. 5714589  
; GENERAL INFORMATION:  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OZKAYNAK, ENGIN  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: RUEGER, DAVID C.  
; APPLICANT: PANG, ROY H.L.  
; TITLE OF INVENTION: OSTEOGENIC DEVICES  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
; STREET: 53 STATE STREET  
; CITY: BOSTON  
; STATE: MASSACHUSETTS  
; COUNTRY: U.S.A.  
; ZIP: 02109  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/447,570  
; FILING DATE: 21-FEB-1992  
; CLASSIFICATION: 536  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 810,560  
; FILING DATE: 20-DEC-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 827,052  
; FILING DATE: 28-JAN-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 660,162  
; FILING DATE: 22-FEB-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 621,988

;; FILING DATE: 04-DEC-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 621,849  
;; FILING DATE: 04-DEC-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 616,374  
;; FILING DATE: 21-NOV-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 600,024  
;; FILING DATE: 18-OCT-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 599,543  
;; FILING DATE: 18-OCT-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 579,865  
;; FILING DATE: 07-SEP-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 569,920  
;; FILING DATE: 20-AUG-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 483,913  
;; FILING DATE: 22-FEB-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 422,613  
;; FILING DATE: 17-OCT-1989  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 315,342  
;; FILING DATE: 23-FEB-1989  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 232,630  
;; FILING DATE: 15-AUG-1988  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 179,460  
;; FILING DATE: 08-APR-1988  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: PITCHER, EDMUND R.  
;; REGISTRATION NUMBER: 27,829  
;; REFERENCE/DOCKET NUMBER: CRP-001CP6  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 617/248-7000  
;; TELEFAX: 617/248-7100  
;; INFORMATION FOR SEQ ID NO: 13:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 484 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-08-447-570-13

Query Match 100.0%; Score 111; DB 1; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

CY 1 INPETHKPCCAPTQLNALIS 20  
Db 439 INPETHKPCCAPTQLNALIS 458

RESULT 189  
US-08-449-700-13  
; Sequence 13, Application US/08449700  
; Patent No. 5863758  
; GENERAL INFORMATION:  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OZKAYNAK, ENGIN  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: RUEGER, DAVID C.  
; APPLICANT: PANG, ROY H.L.  
; TITLE OF INVENTION: OSTEOGENIC DEVICES  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
; STREET: 53 STATE STREET

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.ra1

Page 79

CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,700  
FILING DATE: 21-FEB-1992  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-700-13

Query Match 100.0%; Score 111; DB 2; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCAPQOLNAIS 20  
DB 439 INPETHKPCAPQOLNAIS 458  
RESULT 190  
US-08-449-699A-13  
; Sequence 13, Application US/08449699A  
; Patent No. 5958441  
; GENERAL INFORMATION:  
; APPLICANT: OPPERMAN, HERMAN  
; APPLICANT: OZKAYNAK, ENGİN  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: RUEGER, DAVID C.  
; APPLICANT: PANG, ROY H.L.  
; TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
; STREET: 125 HIGH STREET  
; CITY: BOSTON  
; STATE: MASSACHUSETTS  
; COUNTRY: U.S.A.  
; ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/449,699A  
FILING DATE: 24-MAY-1995  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 01-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-001CP6CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-449-699A-13  
Query Match 100.0%; Score 111; DB 2; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2.6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHKPCAPQOLNAIS 20  
DB 439 INPETHKPCAPQOLNAIS 458  
RESULT 191  
US-09-148-925C-13  
; Sequence 13, Application US/09148925C  
; Patent No. 6551995  
; GENERAL INFORMATION:  
; APPLICANT: OPPERMAN, HERMAN  
; APPLICANT: OZKAYNAK, ENGİN  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: RUEGER, DAVID C.

PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/148,925C  
FILING DATE: 04-Sep-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid

TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
OTHER INFORMATION: /product="OPIC"  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-09-148-925C-13  
Query Match 100.0%; Score 111; DB 4; Length 484;  
Best Local Similarity 100.0%; Pred. No. 2,6e-07;  
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QY 1 INPETHKPCAPQTNLAIS 20  
DB 439 INPETHKPCAPQTNLAIS 458  
RESULT 192  
US-08-957-425-13  
Sequence 13, Application US/08957425  
Patent No. 6586388  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OKATYAK, ENGIN  
KUBERASAMPATH, THANAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1988  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989

; MOLECULE TYPE: protein

RESULT 195  
US-08-406-672-6  
Sequence 6, Application US/08406672  
Patent No. 56744844  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR  
TITLE OF INVENTION: INCREASE BONE MASS IN METABOLIC BONE DISEASES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/406.672  
FILING DATE: 20-MAR-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 752,857  
FILING DATE: 30-AUG-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILJIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-060CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-406-672-6  
Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPVTVPKPCCAPTQLNALS 20  
Db 94 INPVTVPKPCCAPTQLNALS 113

RESULT 196  
US-08-643-563A-6  
Sequence 6, Application US/08643563A  
Patent No. 5707810  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN

APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643.563A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: TWOMEY Esq., MICHAEL J.  
REGISTRATION NUMBER: 38,349  
REFERENCE/DOCKET NUMBER: CRP-058CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-643-563A-6  
Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
OY 1 INPVTVPKPCCAPTQLNALS 20  
Db 94 INPVTVPKPCCAPTQLNALS 113

RESULT 197  
US-08-643-763A-6  
Sequence 6, Application US/08643763A  
Patent No. 5733878  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMAN, HERMAN  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: PANG, ROY H.L.  
TITLE OF INVENTION: MORPHOGENIC-INDUCED PERIODONTAL TISSUE  
REGENERATION.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/643,763A  
FILING DATE: 06-MAY-1996  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-067CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7560  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-643-763A-6

Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPVTVPKPCAPQOLNALS 20  
Db 94 INPVTVPKPCAPQOLNALS 113

RESULT 198  
US-08-462-623-6  
Sequence 6, Application US/08462623  
Patent No. 5739107  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
APPLICANT: CHARETTE, MARC F.  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT OF GASTROINTESTINAL  
TITLE OF INVENTION: ULCERS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/462,623  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.

REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-462-623-6

Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPVTVPKPCAPQOLNALS 20  
Db 94 INPVTVPKPCAPQOLNALS 113

RESULT 199  
US-08-451-953A-6  
Sequence 6, Application US/08451953A  
Patent No. 5741641  
GENERAL INFORMATION:  
APPLICANT: SMART, JOHN  
APPLICANT: OPPERMANN, HERMAN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN SCREENING METHOD  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/451,953A  
FILING DATE: 26-MAY-1995  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER Esq., EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-058CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1.139  
OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"  
US-08-451-953A-6

Query Match 97.3%; Score 108; DB 1; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPDTVPKCCAPTQLNLAIS 20  
Db 94 INPDTVPKCCAPTQLNLAIS 113

RESULT 200

US-08-445-468A-6  
Sequence 6, Application US/08445468A  
Patent No. 5849686

GENERAL INFORMATION:

APPLICANT: KUBERASAMPATH, THANGAVEL

APPLICANT: RUEGER, DAVID C.

APPLICANT: OPPERMAN, HERMAN

APPLICANT: PANG, ROY H.L.

APPLICANT: COHEN, CHARLES M.

TITLE OF INVENTION: MORPHOGEN-INDUCED LIVER REGENERATION

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES

STREET: 45 SOUTH STREET

CITY: HOPKINTON

STATE: MA

COUNTRY: USA

ZIP: 01748

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/445,468A

FILING DATE: 22-MAY-1995

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: FENTON Esq., GILLIAN M.

REGISTRATION NUMBER: 36,508

REFERENCE/DOCKET NUMBER: CRP-072FW2

TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 248-7560

TELEFAX: (617) 248-7100

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:

NAME/KEY: Protein

LOCATION: 1.139

OTHER INFORMATION: /note= "MOP-1 (MATURE FORM)"

US-08-445-468A-6

Query Match 97.3%; Score 108; DB 2; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.9e-07;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPDTVPKCCAPTQLNLAIS 20  
Db 94 INPDTVPKCCAPTQLNLAIS 113

Search completed: October 26, 2004, 07:51:28  
Job time : 46 secs



GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: October 26, 2004, 07:43:29 ; Search time 48 Seconds  
(without alignments)

134.899 Million cell updates/sec

Title: US-10-619-910-11  
Perfect score: 111  
Sequence: 1 INPEITVKKPCAPQLNAIS 20

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1364641 segs, 323758627 residues

Total number of hits satisfying chosen parameters: 1364641

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 200 summaries

Database : Published Applications\_AA:\*

- 1: /cgn2\_6/ptodata/2/pubpaa/US07\_PUBCOMB.pep:\*
- 2: /cgn2\_6/ptodata/2/pubpaa/PCT\_NEW\_PUB.pep:\*
- 3: /cgn2\_6/ptodata/2/pubpaa/US06\_NEW\_PUB.pep:\*
- 4: /cgn2\_6/ptodata/2/pubpaa/US06\_PUBCOMB.pep:\*
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- 14: /cgn2\_6/ptodata/2/pubpaa/US10C\_PUBCOMB.pep:\*
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- 19: /cgn2\_6/ptodata/2/pubpaa/US11\_NEW\_PUB.pep:\*
- 20: /cgn2\_6/ptodata/2/pubpaa/US60\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	111	100.0	20	15	US-10-619-910-11
2	111	100.0	97	10	US-09-754-831A-39
3	111	100.0	102	9	US-09-791-946-1
4	111	100.0	102	14	US-10-187-279-4
5	111	100.0	102	14	US-10-184-279-4
6	111	100.0	107	10	US-09-754-831A-9
7	111	100.0	112	9	US-09-813-398-30
8	111	100.0	118	13	US-09-389-705-12
9	111	100.0	118	13	US-10-115-406-10
10	111	100.0	118	14	US-10-154-333-12
11	111	100.0	118	16	US-10-704-223-10
12	111	100.0	119	9	US-09-813-459-13
13	111	100.0	119	9	US-09-859-211-40

14	111	100.0	119	9	US-09-890-708-18	Sequence 18, Appl
15	111	100.0	119	10	US-09-872-856-40	Sequence 40, Appl
16	111	100.0	119	14	US-10-335-483-22	Sequence 22, Appl
17	111	100.0	119	15	US-10-463-973-40	Sequence 40, Appl
18	111	100.0	119	15	US-10-463-973-40	Sequence 40, Appl
19	111	100.0	119	15	US-10-693-536-12	Sequence 12, Appl
20	111	100.0	119	16	US-10-758-210-12	Sequence 12, Appl
21	111	100.0	139	8	US-08-260-675-5	Sequence 5, Appl
22	111	100.0	139	9	US-09-882-875A-1	Sequence 1, Appl
23	111	100.0	139	10	US-09-952-318A-5	Sequence 5, Appl
24	111	100.0	139	14	US-10-050-050-5	Sequence 5, Appl
25	111	100.0	139	14	US-10-366-345-63	Sequence 63, Appl
26	111	100.0	139	15	US-10-108-260A-2783	Sequence 2783, Ap
27	111	100.0	139	16	US-10-385-064-5	Sequence 5, Appl
28	111	100.0	161	9	US-09-765-527-249	Sequence 249, App
29	111	100.0	161	9	US-09-760-397-2	Sequence 2, Appl
30	111	100.0	161	9	US-10-324-182-2	Sequence 2, Appl
31	111	100.0	169	14	US-08-957-425-9	Sequence 9, Appl
32	111	100.0	169	14	US-10-321-799-9	Sequence 9, Appl
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34	111	100.0	178	9	US-09-760-397-8	Sequence 8, Appl
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36	111	100.0	179	9	US-09-765-527-257	Sequence 257, App
37	111	100.0	179	9	US-09-765-527-261	Sequence 261, App
38	111	100.0	190	9	US-09-760-397-14	Sequence 14, Appl
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40	111	100.0	195	9	US-09-765-527-255	Sequence 255, App
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52	111	100.0	431	8	US-08-260-675-17	Sequence 17, Appl
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59	111	100.0	431	10	US-09-540-466-2	Sequence 2, Appl
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61	111	100.0	431	10	US-09-012-846-2	Sequence 1, Appl
62	111	100.0	431	10	US-09-960-789-1	Sequence 1, Appl
63	111	100.0	431	10	US-09-952-318A-17	Sequence 17, Appl
64	111	100.0	431	14	US-10-062-370-5	Sequence 5, Appl
65	111	100.0	431	14	US-10-083-825-2	Sequence 2, Appl
66	111	100.0	431	14	US-10-122-026-2	Sequence 2, Appl
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68	111	100.0	431	14	US-10-050-050-17	Sequence 17, Appl
69	111	100.0	431	14	US-10-286-152A-8	Sequence 8, Appl
70	111	100.0	431	14	US-10-301-822-10	Sequence 10, Appl
71	111	100.0	431	14	US-10-366-345-39	Sequence 39, Appl
72	111	100.0	431	14	US-10-321-799-2	Sequence 2, Appl
73	111	100.0	431	14	US-10-321-799-2	Sequence 2, Appl
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75	111	100.0	431	14	US-10-295-027-806	Sequence 806, App
76	111	100.0	431	14	US-10-295-027-806	Sequence 806, App
77	111	100.0	431	14	US-10-375-150-6	Sequence 6, Appl
78	111	100.0	431	15	US-10-173-999-58	Sequence 58, Appl
79	111	100.0	431	15	US-10-428-275-6	Sequence 6, Appl
80	111	100.0	431	15	US-10-428-997A-2	Sequence 2, Appl
81	111	100.0	431	15	US-10-302-812-28	Sequence 28, Appl
82	111	100.0	431	15	US-10-290-554-1	Sequence 1, Appl
83	111	100.0	431	16	US-10-753-916-2	Sequence 2, Appl
84	111	100.0	432	9	US-09-361-741-3	Sequence 3, Appl
85	111	100.0	432	14	US-10-270-377-3	Sequence 3, Appl
86	111	100.0	484	8	US-08-957-425-13	Sequence 13, Appl

87	111	100.0	484	14	US-10-321-799-13	Sequence 13, Appl	160	87	78.4	454	14	US-10-375-150-10	Sequence 10, Appl
88	111	100.0	484	15	US-10-428-997A-13	Sequence 13, Appl	161	87	78.4	455	9	US-09-813-398-28	Sequence 28, Appl
89	108	97.3	139	8	US-08-260-675-6	Sequence 6, Appl	162	83	74.8	97	10	US-09-754-831A-15	Sequence 15, Appl
90	108	97.3	139	10	US-09-952-318A-6	Sequence 6, Appl	163	83	74.8	97	10	US-09-754-831A-15	Sequence 15, Appl
91	108	97.3	139	10	US-10-050-050-6	Sequence 6, Appl	164	83	74.8	98	10	US-09-754-831A-13	Sequence 13, Appl
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93	108	97.3	430	8	US-08-957-425-25	Sequence 25, Appl	166	83	74.8	102	10	US-09-754-831A-14	Sequence 44, Appl
94	108	97.3	430	8	US-08-260-675-19	Sequence 19, Appl	167	79	71.2	20	15	US-10-619-910-8	Sequence 8, Appl
95	108	97.3	430	14	US-09-952-318A-19	Sequence 19, Appl	168	78	70.3	22	15	US-10-619-910-4	Sequence 4, Appl
96	108	97.3	430	14	US-10-122-026-4	Sequence 4, Appl	169	77	69.4	102	14	US-10-187-334-9	Sequence 9, Appl
97	108	97.3	430	14	US-10-050-050-19	Sequence 19, Appl	170	77	69.4	118	9	US-09-189-703-14	Sequence 9, Appl
98	108	97.3	430	14	US-10-321-799-13	Sequence 25, Appl	171	77	69.4	118	13	US-10-115-406-12	Sequence 12, Appl
99	108	97.3	430	15	US-10-428-997A-25	Sequence 25, Appl	172	77	69.4	118	14	US-10-154-333-14	Sequence 14, Appl
100	108	97.3	430	16	US-10-302-812-26	Sequence 26, Appl	173	77	69.4	118	16	US-10-704-223-12	Sequence 12, Appl
101	108	97.3	430	16	US-10-385-064-16	Sequence 16, Appl	174	77	69.4	455	8	US-08-260-675-25	Sequence 25, Appl
102	108	97.3	435	9	US-09-784-911-12	Sequence 12, Appl	175	77	69.4	455	10	US-09-952-318A-25	Sequence 25, Appl
103	108	97.3	435	9	US-09-784-911-14	Sequence 14, Appl	176	77	69.4	455	14	US-10-122-026-16	Sequence 16, Appl
104	108	97.3	456	16	US-10-367-094-168	Sequence 168, App	177	77	69.4	455	14	US-10-050-050-25	Sequence 25, Appl
105	104	97.3	438	14	US-10-122-026-14	Sequence 14, Appl	178	77	69.4	21	15	US-10-619-910-7	Sequence 7, Appl
106	97	87.4	49	14	US-10-029-386-29756	Sequence 29756, A	179	74	66.7	19	15	US-10-619-910-3	Sequence 3, Appl
107	97	87.4	102	8	US-08-260-675-28	Sequence 28, Appl	180	73	65.8	102	15	US-10-074-978A-301	Sequence 301, App
108	97	87.4	102	10	US-09-952-318A-13	Sequence 13, Appl	181	73	65.8	105	15	US-10-080-334-209	Sequence 209, App
109	97	87.4	102	10	US-09-952-318A-28	Sequence 28, Appl	182	73	65.8	105	15	US-10-072-012-832	Sequence 832, App
110	97	87.4	102	14	US-10-050-050-28	Sequence 28, Appl	183	73	65.8	105	15	US-10-072-012-834	Sequence 834, App
111	97	87.4	102	14	US-10-187-394-14	Sequence 14, Appl	184	72	64.9	102	11	US-09-930-512-77	Sequence 77, Appl
112	97	87.4	112	9	US-09-813-358-29	Sequence 29, Appl	185	72	64.9	102	15	US-10-080-334-210	Sequence 210, App
113	97	87.4	118	9	US-09-389-705-11	Sequence 9, Appl	186	72	64.9	102	15	US-10-074-978A-300	Sequence 300, App
114	97	87.4	118	13	US-10-115-406-9	Sequence 9, Appl	187	72	64.9	102	15	US-10-072-012-831	Sequence 831, App
115	97	87.4	118	16	US-10-154-333-11	Sequence 11, Appl	188	72	64.9	102	15	US-10-072-012-833	Sequence 833, App
116	97	87.4	118	16	US-10-704-223-9	Sequence 9, Appl	189	72	64.9	139	8	US-08-260-675-8	Sequence 8, Appl
117	97	87.4	119	9	US-09-813-459-12	Sequence 12, Appl	190	72	64.9	139	10	US-09-952-318A-8	Sequence 8, Appl
118	97	87.4	119	9	US-09-858-211-39	Sequence 39, Appl	191	72	64.9	139	14	US-10-050-050-8	Sequence 8, Appl
119	97	87.4	119	10	US-09-880-708-17	Sequence 17, Appl	192	72	64.9	139	16	US-10-385-064-8	Sequence 8, Appl
120	97	87.4	119	10	US-09-872-856-39	Sequence 39, Appl	193	72	64.9	399	8	US-08-957-425-27	Sequence 27, Appl
121	97	87.4	119	14	US-10-335-483-21	Sequence 21, Appl	194	72	64.9	399	8	US-08-260-675-23	Sequence 23, Appl
122	97	87.4	119	15	US-10-463-973-39	Sequence 39, Appl	195	72	64.9	399	14	US-10-952-318A-23	Sequence 23, Appl
123	97	87.4	119	15	US-10-693-536-11	Sequence 11, Appl	196	72	64.9	399	14	US-10-122-026-8	Sequence 8, Appl
124	97	87.4	119	16	US-10-758-210-11	Sequence 11, Appl	197	72	64.9	399	14	US-10-050-050-23	Sequence 23, Appl
125	97	87.4	139	14	US-10-366-345-62	Sequence 62, Appl	198	72	64.9	399	14	US-10-350-747-2	Sequence 2, Appl
126	97	87.4	143	13	US-10-002-878-5	Sequence 5, Appl	199	72	64.9	399	14	US-10-321-799-27	Sequence 27, Appl
127	97	87.4	433	9	US-03-784-911-8	Sequence 8, Appl	200	72	64.9	399	15	US-10-428-997A-27	Sequence 27, Appl
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131	97	87.4	513	14	US-10-164-279-33	Sequence 33, Appl							
132	97	87.4	513	14	US-10-366-345-38	Sequence 38, Appl							
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134	97	87.4	513	14	US-10-375-150-8	Sequence 8, Appl							
135	94	84.7	102	8	US-08-260-675-13	Sequence 13, Appl							
136	94	84.7	102	14	US-10-050-050-13	Sequence 13, Appl							
137	94	84.7	102	16	US-10-385-064-13	Sequence 16, Appl							
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150	87	78.4	119	10	US-09-872-856-41	Sequence 41, Appl							
151	87	78.4	119	14	US-10-335-483-23	Sequence 23, Appl							
152	87	78.4	119	15	US-10-463-973-41	Sequence 41, Appl							
153	87	78.4	119	15	US-10-693-536-13	Sequence 13, Appl							
154	87	78.4	119	16	US-10-758-210-13	Sequence 13, Appl							
155	87	78.4	148	14	US-10-366-345-61	Sequence 61, Appl							
156	87	78.4	453	14	US-10-122-026-18	Sequence 18, Appl							
157	87	78.4	454	14	US-10-286-152A-6	Sequence 6, Appl							
158	87	78.4	454	14	US-10-164-279-29	Sequence 29, Appl							
159	87	78.4	454	14	US-10-366-345-37	Sequence 37, Appl							

## ALIGNMENTS

```

RESULT 1
US-10-619-910-11
; Sequence 11, Application US/1061910
; Publication No. US2004005384A1
; GENERAL INFORMATION:
; APPLICANT: Kyocera Corporation
; APPLICANT: Nishimura, Yoshiniko
; APPLICANT: Suzuki, Yoshinaka
; APPLICANT: Tanihara, Masao
; TITLE OF INVENTION: A Peptide and Osteogenic Accelerator
; FILE REFERENCE: 81918-0001
; CURRENT APPLICATION NUMBER: US/10/619, 910
; PRIOR FILING DATE: 2003-07-15
; PRIOR APPLICATION NUMBER: US/09/439, 779B
; NUMBER OF SEQ ID NOS: 11
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO. 11
; LENGTH: 20
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION:
US-10-619-910-11
Query Match      100.0%; Score 111; DB 15; Length 20;
Best Local Similarity 100.0%; Pred. No. 7; 8e-08;

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Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVFKPCAPTOJNAIS 20  
DB 1 INETVFKPCAPTOJNAIS 20

## RESULT 2

US-09-754-831A-39  
Sequence 39, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Kuberassampath, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STX-006CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/332,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 39  
LENGTH: 97  
TYPE: PRT  
ORGANISM: mammalian  
FEATURE:  
OTHER INFORMATION: OPI shorter sequence capable of inducing endochondral bone format  
US-09-754-831A-39

Query Match 100.0%; Score 111; DB 10; Length 97;  
Best Local Similarity 100.0%; Pred. No. 3.5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVFKPCAPTOJNAIS 20  
DB 52 INETVFKPCAPTOJNAIS 71

## RESULT 3

US-09-791-946-1  
Sequence 1, Application US/09791946  
Patent No. US20020028453A1  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: GRIFFITH, DIANA L  
APPLICANT: CARLSON, WILLIAM D  
APPLICANT: RUEGER, DAVID C  
APPLICANT: SAMPATH, KUBER T  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR PRODUCING  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESS:  
ADDRESSER: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES,  
INC.  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/791,946

FILING DATE: 22-Feb-2001

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/786,284

FILING DATE: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: PITCHER, EDMUND R

REGISTRATION NUMBER: 27,829

REFERENCE/DOCKET NUMBER: CRP-102

TELECOMMUNICATION INFORMATION:

TELEPHONE: (508) 435-9001

TELEFAX: (508) 435-0992

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 102 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:

NAME/KEY: Protein

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OTHER INFORMATION: /Product= "hop-1"

SEQUENCE DESCRIPTION: SEQ ID NO: 1:

US-09-791-946-1

Query Match 100.0%; Score 111; DB 9; Length 102;  
Best Local Similarity 100.0%; Pred. No. 3.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVFKPCAPTOJNAIS 20  
DB 57 INETVFKPCAPTOJNAIS 76

## RESULT 4

US-10-187-394-16  
Sequence 16, Application US/10187394  
Publication No. US20030176667A1  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSER: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187,394  
FILING DATE: 28-JUN-2002  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398  
FILING DATE: 02-FEB-2000  
CLASSIFICATION:  
APPLICATION NUMBER: US 08/478,097

FILING DATE: 07-JUN-1995  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESO, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7100  
TELEFAX: 617-248-7000  
INFORMATION FOR SEQ ID NO: 16:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note="OP-1 SEQUENCE"  
US-10-187-394-16

Query Match 100.0%; Score 111; DB 14; Length 102;  
Best Local Similarity 100.0%; Pred. No. 3.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 57 INPETHPKPCCAPTQLNLAIS 76

RESULT 5  
US-10-164-279-4  
Sequence 4, Application US/10164279  
Publication No. US20030185792A1  
GENERAL INFORMATION:  
APPLICANT: Keck, P.  
TITLE OF INVENTION: MORPHOGEN ANALOGS OF BOND MORPHOGENIC PROTEINS  
FILE REFERENCE: CIBT-P04-566  
CURRENT APPLICATION NUMBER: US/10/164,279  
CURRENT FILING DATE: 2002-06-06  
PRIOR APPLICATION NUMBER: 09/791946  
PRIOR FILING DATE: 2001-02-22  
NUMBER OF SEQ ID NOS: 64  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 4  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-164-279-4

Query Match 100.0%; Score 111; DB 14; Length 102;  
Best Local Similarity 100.0%; Pred. No. 3.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 57 INPETHPKPCCAPTQLNLAIS 76

RESULT 6  
US-09-754-831A-9  
Sequence 9, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Kuberatampah, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STK-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03

PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 9  
LENGTH: 107  
TYPE: PRT  
ORGANISM: mammalian  
FEATURE:  
OTHER INFORMATION: OP1 protein sequence with osteogenic activity  
US-09-754-831A-9

Query Match 100.0%; Score 111; DB 10; Length 107;  
Best Local Similarity 100.0%; Pred. No. 3.9e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 62 INPETHPKPCCAPTQLNLAIS 81

RESULT 7  
US-09-813-398-30  
Sequence 30, Application US/09813398  
Patent No. US20020169292A1  
GENERAL INFORMATION:  
APPLICANT: Bruce D. Weintraub  
APPLICANT: Mariusz W. Skrzydinski  
TITLE OF INVENTION: University of Maryland  
FILE REFERENCE: USFMD-00301  
CURRENT APPLICATION NUMBER: US/09/813,398  
CURRENT FILING DATE: 2001-03-20  
PRIOR APPLICATION NUMBER: PCT/US99/05908  
PRIOR FILING DATE: 1999-03-19  
PRIOR APPLICATION NUMBER: PCT/US98/19772  
PRIOR FILING DATE: 1998-09-22  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 30  
LENGTH: 112  
TYPE: PRT  
ORGANISM: HOMO SAPIEN  
US-09-813-398-30

Query Match 100.0%; Score 111; DB 9; Length 112;  
Best Local Similarity 100.0%; Pred. No. 4.1e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQLNLAIS 20  
DB 68 INPETHPKPCCAPTQLNLAIS 87

RESULT 8  
US-09-389-705-12  
Sequence 12, Application US/09389705  
Publication No. US20010018509A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:

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; ADDRESS: SPENSLEY HORN JUBAS & LUBITZ
; STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
; CITY: LOS ANGELES
; STATE: CALIFORNIA
; COUNTRY: US
; ZIP: 90067
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/389,705
; FILING DATE: 03-Sep-1999
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/153,733
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: WETHERELL, JR. Ph.D., JOHN R.
; REGISTRATION NUMBER: 31,678
; REFERENCE/DOCKET NUMBER: FD2279 PCT
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 455-5110
; TELEFAX: (619) 455-5110
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 118 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: OP-1
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..118
; SEQUENCE DESCRIPTION: SEQ ID NO: 12:
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US-09-389-705-12
;
Query Match          100.0%; Score 111; DB 9; Length 118;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPFTQLNLAIS 20
Db 73 INPETHPKPCAPFTQLNLAIS 92

RESULT 9
US-10-115-406-10
; Sequence 10, Application US/10115406
; Publication No. US20020127612A1
; GENERAL INFORMATION:
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE
; APPLICANT: LEE, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
; FILE REFERENCE: JHU1190-3
; CURRENT APPLICATION NUMBER: US/10/115,406
; CURRENT FILING DATE: 2002-04-02
; PRIOR APPLICATION NUMBER: 09/301,520
; PRIOR FILING DATE: 1999-04-28
; PRIOR APPLICATION NUMBER: US 09/172,062
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: US 08/491,835
; PRIOR FILING DATE: 1995-10-23
; PRIOR APPLICATION NUMBER: PCT/US94/00685
; PRIOR FILING DATE: 1994-01-12
; PRIOR APPLICATION NUMBER: US 08/003,303
; PRIOR FILING DATE: 1993-01-12
; NUMBER OF SEQ ID NOS: 28
; SOFTWARE: Patent version 3.0
; SEQ ID NO 10
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; LENGTH: 118
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-115-406-10
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Query Match          100.0%; Score 111; DB 13; Length 118;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPFTQLNLAIS 20
Db 73 INPETHPKPCAPFTQLNLAIS 92

RESULT 10
US-10-154-333-12
; Sequence 12, Application US/10154333
; Publication No. US20030109684A1
; GENERAL INFORMATION:
; APPLICANT: JOHNS HOPKINS UNIVERSITY
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3
; NUMBER OF SEQUENCES: 29
; CORRESPONDENCE ADDRESSES:
; ADDRESS: SPENSLEY HORN JUBAS & LUBITZ
; STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
; CITY: LOS ANGELES
; STATE: CALIFORNIA
; COUNTRY: US
; ZIP: 90067
; COMPUTER READABLE FORM:
; MEDIUM TYPE: floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/154,333
; FILING DATE: 21-May-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/389,705
; FILING DATE: 03-Sep-1999
; APPLICATION NUMBER: 09/153,733
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: WETHERELL, JR. Ph.D., JOHN R.
; REGISTRATION NUMBER: 31,678
; REFERENCE/DOCKET NUMBER: FD2279 PCT
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 455-5110
; TELEFAX: (619) 455-5110
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 118 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: OP-1
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..118
; SEQUENCE DESCRIPTION: SEQ ID NO: 12:
;
US-10-154-333-12
;
Query Match          100.0%; Score 111; DB 14; Length 118;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCAPFTQLNLAIS 20
Db 73 INPETHPKPCAPFTQLNLAIS 92
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RESULT 11
US-10-704-223-10
; Sequence 10, Application US/10704223
; Publication No. US20040152143A1
; GENERAL INFORMATION:
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY
; APPLICANT: LEE, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
; FILE REFERENCE: JHU1190-7
; CURRENT APPLICATION NUMBER: US/10/704,223
; CURRENT FILING DATE: 2003-11-07
; PRIOR APPLICATION NUMBER: US 10/115,406
; PRIOR FILING DATE: 2002-04-02
; PRIOR APPLICATION NUMBER: US 09/301,520
; PRIOR FILING DATE: 1999-04-28
; PRIOR APPLICATION NUMBER: US 09/172,062
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: US 08/491,835
; PRIOR FILING DATE: 1995-10-23
; PRIOR APPLICATION NUMBER: PCT/US94/00685
; PRIOR FILING DATE: 1994-01-12
; PRIOR APPLICATION NUMBER: US 08/003,303
; PRIOR FILING DATE: 1993-01-12
; NUMBER OF SEQ ID NOS: 28
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 10
; LENGTH: 118
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-704-223-10

Query Match      100.0%; Score 111; DB 16; Length 118;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTQLNALS 20
Db 73 INPETHKPCCAPTQLNALS 92

RESULT 12
US-09-813-459-13
; Sequence 13, Application US/09813459
; Patent No. US20020107369A1
; GENERAL INFORMATION:
; APPLICANT: Lee, Se-Jin
; CUMMINGHAM, No. US20020107369A1
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESS: Spensley Horn Jubas & Lubitz
; STREET: 1880 Century Park East, Suite 500
; CITY: Los Angeles
; STATE: California
; COUNTRY: USA
; ZIP: 90067
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/813,459
; FILING DATE: 20-Mar-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/624,635
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Wetherell, Jr., Ph.D., John R.,
; REGISTRATION NUMBER: 31,678
; REFERENCE/DOCKET NUMBER: PD-3054
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TELECOMMUNICATION INFORMATION:
; TELEPHONE: (619) 455-5100
; TELEFAX: (619) 455-5110
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 119 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: OP-1
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..119
; SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-09-813-459-13

Query Match      100.0%; Score 111; DB 9; Length 119;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTQLNALS 20
Db 74 INPETHKPCCAPTQLNALS 93

RESULT 13
US-09-859-211-40
; Sequence 40, Application US/09859211
; Patent No. US20020157125A1
; GENERAL INFORMATION:
; APPLICANT: Lee, Se-Jin
; APPLICANT: McPherson, Alexandra C.
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8
; FILE REFERENCE: 07265/144001
; CURRENT APPLICATION NUMBER: US/09/859,211
; CURRENT FILING DATE: 2001-05-15
; PRIOR APPLICATION NUMBER: 09/019,070
; PRIOR FILING DATE: 1998-02-05
; PRIOR APPLICATION NUMBER: 08/862,445
; PRIOR FILING DATE: 1997-05-23
; PRIOR APPLICATION NUMBER: 08/847,910
; PRIOR FILING DATE: 1997-04-28
; PRIOR APPLICATION NUMBER: 08/795,071
; PRIOR FILING DATE: 1997-02-05
; PRIOR APPLICATION NUMBER: 08/525,596
; PRIOR FILING DATE: 1995-10-26
; PRIOR APPLICATION NUMBER: PCT/US94/03019
; PRIOR FILING DATE: 1994-03-18
; PRIOR APPLICATION NUMBER: 08/033,923
; PRIOR FILING DATE: 1993-03-19
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 40
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-859-211-40

Query Match      100.0%; Score 111; DB 9; Length 119;
Best Local Similarity 100.0%; Pred. No. 4.3e-07;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHKPCCAPTQLNALS 20
Db 74 INPETHKPCCAPTQLNALS 93

RESULT 14
US-09-880-708-18
; Sequence 18, Application US/09880708
; Patent No. US20020165361A1
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GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5  
NUMBER OF SEQUENCES: 28  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Gray Cary Ware & Freidenrich LLP  
STREET: 4365 Executive Drive, Suite 1600  
CITY: San Diego  
STATE: CA  
COUNTRY: USA  
ZIP: 92121-2189  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/880,708  
FILING DATE: 12-Jun-2001  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/145,060  
FILING DATE: <Unknown>  
APPLICATION NUMBER: 08/003,144  
FILING DATE: 12-JAN-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Lisa A. Haile, Ph.D.  
REGISTRATION NUMBER: 38,347  
REFERENCE/DOCKET NUMBER: 07265/057002  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 858/677-1456  
TELEFAX: 619/677-1465  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
SEQUENCE DESCRIPTION: SEQ ID NO: 18:  
US-09-880-708-16  
Query Match 100.0%; Score 111; DB 9; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETYKPCCAPTQLNALS 20  
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DB 74 INPETYKPCCAPTQLNALS 93  
RESULT 15  
US-09-872-856-40  
Sequence 40, Application US/09872856  
Publication No. US20030074680A1  
GENERAL INFORMATION:  
APPLICANT: Johns Hopkins University School of Medicine  
APPLICANT: Lee, Se-Jin  
APPLICANT: McPherson, Alexandra  
TITLE OF INVENTION: Growth Differentiation Factor-8  
FILE REFERENCE: JHU1120-17  
CURRENT APPLICATION NUMBER: US/09/872,856  
CURRENT FILING DATE: 2001-06-01  
PRIOR APPLICATION NUMBER: US 09/124,180  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US 09/019,070  
PRIOR FILING DATE: 1998-02-05  
PRIOR APPLICATION NUMBER: US 08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: US 08/647,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: US 08/795,071

PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US 08/525,596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US 08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 40  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-872-856-40  
Query Match 100.0%; Score 111; DB 10; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETYKPCCAPTQLNALS 20  
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DB 74 INPETYKPCCAPTQLNALS 93  
RESULT 16  
US-10-335-483-22  
Sequence 22, Application US/10335483  
Publication No. US20030120058A1  
GENERAL INFORMATION:  
APPLICANT: Huynh, Thanh  
Lee, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
NUMBER OF SEQUENCES: 32  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson P.C.  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla  
STATE: CA  
COUNTRY: US  
ZIP: 92037  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: Windows95  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/335,483  
FILING DATE: 31-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/177,860  
FILING DATE: <Unknown>  
APPLICATION NUMBER: 08/525,596  
FILING DATE: 19-SEP-1995  
APPLICATION NUMBER: PCT/US94/07762  
FILING DATE: 08-JUL-1994  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D. John R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: 07265/075001  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-678-5099  
TELEFAX: 619-678-5070  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: OP-1  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 22:  
US-10-335-483-22

Query Match 100.0%; Score 111; DB 14; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 17  
US-10-463-973-40  
Sequence 40, Application US/10463973  
Publication No. US20040055027A1  
GENERAL INFORMATION:  
APPLICANT: Johns Hopkins University School of Medicine  
APPLICANT: Lee, Se-Jin  
APPLICANT: McPherson, Alexandra  
TITLE OF INVENTION: Growth Differentiation Factor-8  
FILE REFERENCE: JHU1120-17  
CURRENT FILING DATE: 2003-06-17  
CURRENT APPLICATION NUMBER: US/10/463,973  
PRIOR FILING DATE: 2001-06-01  
PRIOR APPLICATION NUMBER: US/09/872,856  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US/09/124,180  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US/09/019,070  
PRIOR FILING DATE: 1998-02-05  
PRIOR APPLICATION NUMBER: US/08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: US/08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: US/08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US/08/525,596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US/08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 40  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-463-973-40

Query Match 100.0%; Score 111; DB 15; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 18  
US-10-693-536-12  
Sequence 12, Application US/10693536  
Publication No. US20040067556A1  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-Jin  
APPLICANT: Huynh, Thanh  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6  
NUMBER OF SEQUENCES: 21  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Richardson  
STREET: 4225 Executive Square, Suite 1400  
CITY: La Jolla

STATE: California  
COUNTRY: USA  
ZIP: 92037

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/693,536

FILING DATE: 23-Oct-2003

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/619,061

FILING DATE: 18-Jul-2000

APPLICATION NUMBER: US/09/097,616

FILING DATE: 15-JUN-1998

APPLICATION NUMBER: US/08/581,529

FILING DATE: 15-Apr-1996

ATTORNEY/AGENT INFORMATION:

NAME: Lisa A. Haile, Ph.D.

REGISTRATION NUMBER: 38,347

REFERENCE/DOCKET NUMBER: 07265/082001

TELECOMMUNICATION INFORMATION:

TELEPHONE: (619) 678-5070

TELEFAX: (619) 678-5099

INFORMATION FOR SEQ ID NO: 12:

SEQUENCE CHARACTERISTICS:

LENGTH: 119 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

IMMEDIATE SOURCE:

CLONE: OP-1

FEATURE:

NAME/KEY: Protein

LOCATION: 1..119

SEQUENCE DESCRIPTION: SEQ ID NO: 12:

US-10-693-536-12

Query Match 100.0%; Score 111; DB 15; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 19  
US-10-758-210-12  
Sequence 12, Application US/10758210  
Publication No. US20040127696A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-Jin  
APPLICANT: HUYNH, Thanh  
TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7  
FILE REFERENCE: JHU1130-2  
CURRENT FILING DATE: 2004-01-14  
CURRENT APPLICATION NUMBER: US/10/758,210  
PRIOR FILING DATE: 2004-01-14  
PRIOR APPLICATION NUMBER: US/09/412,791D  
PRIOR FILING DATE: 1999-10-05  
PRIOR APPLICATION NUMBER: US/08/581,528  
PRIOR FILING DATE: 1996-01-09  
PRIOR APPLICATION NUMBER: PCT/US94/07799  
PRIOR FILING DATE: 1994-07-08  
NUMBER OF SEQ ID NOS: 21  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 12  
LENGTH: 119  
TYPE: PRT



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ORGANISM: Homo sapiens  
US-10-758-210-12

Query Match 100.0%; Score 111; DB 16; Length 119;  
Best Local Similarity 100.0%; Pred. No. 4.3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 74 INPETHKPCCAPTOLNAIS 93

RESULT 20

US-08-260-675-5  
Sequence 5, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY HL  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER ESQ, EDWARD R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Homo sapiens  
TISSUE TYPE: HIPPOCAMPUS  
FEATURE:  
NAME/KEY: Protein

LOCATION: 1..139  
OTHER INFORMATION: /label= hopl-MATURE  
US-08-260-675-5

Query Match 100.0%; Score 111; DB 8; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 21

US-09-882-875A-1  
Sequence 1, Application US/09882875A  
Patent No. US20020151985A1  
GENERAL INFORMATION:  
APPLICANT: KUBERASAMPATH, Thangavel  
BERLOWITZ-TARRANT, Lawrence  
TITLE OF INVENTION: SYNTHETIC BONE MATRIX  
NUMBER OF SEQUENCES: 1  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 High St.  
CITY: Boston  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/882,875A  
FILING DATE: 15-Jun-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/104,865  
FILING DATE: 25-JUN-1998  
APPLICATION NUMBER: US 08/443,676  
FILING DATE: 18-MAY-1995  
APPLICATION NUMBER: US 07/529,852  
FILING DATE: 29-MAY-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: VITO, Christine C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: STK-049CN2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: <Unknown>  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
US-09-882-875A-1

Query Match 100.0%; Score 111; DB 9; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
DB 94 INPETHKPCCAPTOLNAIS 113

RESULT 22

US-09-952-318A-5  
Sequence 5, Application US/09952318A  
Publication No. US20030224979A1  
GENERAL INFORMATION:  
APPLICANT: Kuberampath et al.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
TITLE OF INVENTION: METABOLIC BONE DISEASE  
FILE REFERENCE: JJC-P06-522  
CURRENT APPLICATION NUMBER: US/09/952,318A  
CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/1170,936  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,983  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 5  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-952-318A-5

Query Match 100.0%; Score 111; DB 10; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 94 INPETHKPCCAPTOLN1S 113

RESULT 23  
US-10-050-050-5  
Sequence 5, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARRETTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-Jan-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113

FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: PENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note="HOP-1 (MATURE FORM)"  
US-10-050-050-5

Query Match 100.0%; Score 111; DB 14; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 94 INPETHKPCCAPTOLN1S 113

RESULT 24  
US-10-366-345-63  
Sequence 63, Application US/10366345  
Publication No. US20030224501A1  
GENERAL INFORMATION:  
APPLICANT: Young, et al.  
TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and  
FILE REFERENCE: PT189  
CURRENT APPLICATION NUMBER: US/10/366,345  
CURRENT FILING DATE: 2003-02-14  
NUMBER OF SEQ ID NOS: 77  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 63  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-366-345-63

Query Match 100.0%; Score 111; DB 14; Length 139;  
Best Local Similarity 100.0%; Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTOLN1S 20  
Db 94 INPETHKPCCAPTOLN1S 113

RESULT 25  
US-10-108-260A-2783  
Sequence 2783, Application US/10108260A  
Publication No. US20040005560A1  
GENERAL INFORMATION:  
APPLICANT: HELIX RESEARCH INSTITUTE  
TITLE OF INVENTION: No. US20040005560A1 full length cDNA  
FILE REFERENCE: H1-A0106  
CURRENT APPLICATION NUMBER: US/10/108,260A  
CURRENT FILING DATE: 2002-03-27  
NUMBER OF SEQ ID NOS: 5458  
SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 2783  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-108-260A-2783

Query Match  
Best Local Similarity 100.0%; Score 111; DB 15; Length 139;  
Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQLNMAIS 20  
94 INPETHKPCCAPTQLNMAIS 113

RESULT 26  
US-10-385-064-5  
Sequence 5, Application US/10385064  
Publication No. US20040102373A1  
GENERAL INFORMATION:  
APPLICANT: Cohen, Charles M.  
APPLICANT: Kuberanampath, Thangavel  
APPLICANT: Oppermann, Hermann  
APPLICANT: Rueger, David C.  
TITLE OF INVENTION: Protein induced Morphogenesis  
FILE REFERENCE: CEM-2 DIV (00950-502 DIV)  
CURRENT APPLICATION NUMBER: US/10/385,064  
CURRENT FILING DATE: 2003-03-10  
PRIOR APPLICATION NUMBER: US/09/464,206  
PRIOR FILING DATE: 1999-12-15  
PRIOR APPLICATION NUMBER: 08/396,684  
PRIOR FILING DATE: 1995-03-01  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 5  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: tissue type hippocampus h0P1-MATURE  
US-10-385-064-5

Query Match  
Best Local Similarity 100.0%; Score 111; DB 16; Length 139;  
Pred. No. 5e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQLNMAIS 20  
94 INPETHKPCCAPTQLNMAIS 113

RESULT 27  
US-09-765-527-249  
Sequence 249, Application US/09765527  
Patent No. US2002000638A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/765,527  
FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 249:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 161 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 249:  
US-09-765-527-249

Query Match  
Best Local Similarity 100.0%; Score 111; DB 9; Length 161;  
Pred. No. 5.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQLNMAIS 20  
116 INPETHKPCCAPTQLNMAIS 135

RESULT 28  
US-09-760-397-2  
Sequence 2, Application US/09760397  
Patent No. US20020009781A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/11041US01  
CURRENT APPLICATION NUMBER: US/09/760,397  
CURRENT FILING DATE: 2001-01-12  
PRIOR APPLICATION NUMBER: 09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: PatentIn Ver. 2.0  
SEQ ID NO 2  
LENGTH: 161  
TYPE: PRT  
ORGANISM: Human  
US-09-760-397-2

Query Match  
Best Local Similarity 100.0%; Score 111; DB 9; Length 161;  
Pred. No. 5.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 INPETHKPCCAPTQLNMAIS 20  
116 INPETHKPCCAPTQLNMAIS 135

RESULT 29  
US-10-324-182-2  
Sequence 2, Application US/10324182  
Publication No. US20030194782A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/11041US01  
CURRENT APPLICATION NUMBER: US/10/324,182  
CURRENT FILING DATE: 2002-12-20  
PRIOR APPLICATION NUMBER: US/09/271,970

PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patentin Ver. 2.0  
SEQ ID NO 2  
LENGTH: 161  
TYPE: PRT  
ORGANISM: Human  
US-10-324-182-2

Query Match 100.0%; Score 111; DB 14; Length 161;  
Best Local Similarity 100.0%; Pred. No. 5.7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOINAI 20  
Db 116 INPETHKPCAPTOINAI 135

RESULT 30  
US-08-957-425-9  
Sequence 9, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:

APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989

APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CPS  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-08-957-425-9

Query Match 100.0%; Score 111; DB 8; Length 169;  
Best Local Similarity 100.0%; Pred. No. 6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOINAI 20  
Db 124 INPETHKPCAPTOINAI 143

RESULT 31  
US-10-321-799-9  
Sequence 9, Application US/10321799  
Publication No. US20030224996A1  
GENERAL INFORMATION:

APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849

FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CE6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-10-321-799-9  
Query Match 100.0%; Score 111; DB 14; Length 169;  
Best Local Similarity 100.0%; Pred. No. 6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHPCCAPTQNLNLS 20  
DB 124 INPETHPCCAPTQNLNLS 143  
RESULT 32  
US-10-428-997A-9  
Sequence 9, Application US/10428997A  
Publication No. US20040077546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMAN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STK-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 9:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 169 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
US-10-428-997A-9  
Query Match 100.0%; Score 111; DB 15; Length 169;  
Best Local Similarity 100.0%; Pred. No. 6e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
CY 1 INPETHPCCAPTQNLNLS 20

DB 124 INPETHKPCCAPTOLNALS 143

RESULT 33  
US-09-760-397-8  
; Sequence 8, Application US/09760397  
; Patent No. US20020009781A1  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; APPLICANT: Gavitt, Patrick D.  
; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
; FILE REFERENCE: 1103/1104US01  
; CURRENT APPLICATION NUMBER: US/09/760,397  
; CURRENT FILING DATE: 2001-01-12  
; PRIOR APPLICATION NUMBER: 09/271,970  
; PRIOR FILING DATE: 1999-03-18  
; NUMBER OF SEQ ID NOS: 16  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO: 8  
; LENGTH: 178  
; TYPE: PRT  
; ORGANISM: Human  
US-09-760-397-8

Query Match 100.0%; Score 111, DB 9, Length 178;  
Best Local Similarity 100.0%; Pred. No. 6,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 116 INPETHKPCCAPTOLNALS 135

RESULT 34  
US-10-324-182-8  
; Sequence 8, Application US/10324182  
; Publication No. US20030194782A1  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; APPLICANT: Gavitt, Patrick D.  
; TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
; FILE REFERENCE: 1103/1104US01  
; CURRENT APPLICATION NUMBER: US/10/324,182  
; CURRENT FILING DATE: 2002-12-20  
; PRIOR APPLICATION NUMBER: US/09/271,970  
; PRIOR FILING DATE: 1999-03-18  
; NUMBER OF SEQ ID NOS: 16  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO: 8  
; LENGTH: 178  
; TYPE: PRT  
; ORGANISM: Human  
US-10-324-182-8

Query Match 100.0%; Score 111, DB 14, Length 178;  
Best Local Similarity 100.0%; Pred. No. 6,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 116 INPETHKPCCAPTOLNALS 135

RESULT 35  
US-09-765-527-257  
; Sequence 257, Application US/09765527  
; Patent No. US20020006638A1  
; GENERAL INFORMATION:  
; APPLICANT: Better, Marc D.  
; TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
; Fusion Proteins and BPI-Derived Peptides  
; NUMBER OF SEQUENCES: 265

## CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois

COUNTRY: United States of America  
ZIP: 60606-6402

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/765,527

FILING DATE: 18-Jan-2001

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/621,803

FILING DATE: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: Borun, Michael F.

REGISTRATION NUMBER: 25,447

REFERENCE/DOCKET NUMBER: 27129/33199

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312/474-6300

TELEFAX: 312/474-0448

TELEX: 25-3856

INFORMATION FOR SEQ ID NO: 257:

SEQUENCE CHARACTERISTICS:

LENGTH: 179 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 257:

QY 1 INPETHKPCCAPTOLNALS 20  
DB 116 INPETHKPCCAPTOLNALS 135

Query Match 100.0%; Score 111, DB 9, Length 179;  
Best Local Similarity 100.0%; Pred. No. 6,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

## RESULT 36

US-09-765-527-261

; Sequence 261, Application US/09765527

; Patent No. US20020006638A1

; GENERAL INFORMATION:

APPLICANT: Better, Marc D.

TITLE OF INVENTION: Methods for Recombinant Microbial Production of

Fusion Proteins and BPI-Derived Peptides

NUMBER OF SEQUENCES: 265

CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

STREET: 6300 Sears Tower, 233 South Wacker Drive

CITY: Chicago

STATE: Illinois

COUNTRY: United States of America

ZIP: 60606-6402

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/765,527

FILING DATE: 18-Jan-2001

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/621,803

FILING DATE: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: Borun, Michael F.

REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 261:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 179 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 261:  
US-09-765-527-261

Query Match 100.0%; Score 111; DB 9; Length 179;  
Best Local Similarity 100.0%; Pred. No. 6,3e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQNLNALS 20  
DB 116 INPETHPKPCCAPTQNLNALS 135

RESULT 37  
US-09-760-397-14  
Sequence 14, Application US/09760397  
Patent No. US20020009781A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01  
CURRENT APPLICATION NUMBER: US/09/760,397  
CURRENT FILING DATE: 2001-01-12  
PRIOR APPLICATION NUMBER: 09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 14  
LENGTH: 190  
TYPE: PRT  
ORGANISM: Human  
US-09-760-397-14

Query Match 100.0%; Score 111; DB 9; Length 190;  
Best Local Similarity 100.0%; Pred. No. 6,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQNLNALS 20  
DB 116 INPETHPKPCCAPTQNLNALS 135

RESULT 38  
US-10-324-182-14  
Sequence 14, Application US/10324182  
Publication No. US20030194782A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
APPLICANT: Gavitt, Patrick D.  
TITLE OF INVENTION: Improved Methods for Recombinant Peptide Production  
FILE REFERENCE: 1103/1104US01  
CURRENT APPLICATION NUMBER: US/10/324,182  
CURRENT FILING DATE: 2002-12-20  
PRIOR APPLICATION NUMBER: US/09/271,970  
PRIOR FILING DATE: 1999-03-18  
NUMBER OF SEQ ID NOS: 16  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 14  
LENGTH: 190  
TYPE: PRT  
ORGANISM: Human

US-10-324-182-14

Query Match 100.0%; Score 111; DB 14; Length 190;  
Best Local Similarity 100.0%; Pred. No. 6,7e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQNLNALS 20  
DB 116 INPETHPKPCCAPTQNLNALS 135

RESULT 39  
US-09-765-527-255  
Sequence 255, Application US/09765527  
Patent No. US2002000638A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
NUMBER OF SEQUENCES: 265  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/765,527  
FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 255:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 194 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 255:  
US-09-765-527-255

Query Match 100.0%; Score 111; DB 9; Length 194;  
Best Local Similarity 100.0%; Pred. No. 6,8e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHPKPCCAPTQNLNALS 20  
DB 116 INPETHPKPCCAPTQNLNALS 135

RESULT 40  
US-09-765-527-263  
Sequence 263, Application US/09765527  
Patent No. US2002000638A1  
GENERAL INFORMATION:  
APPLICANT: Better, Marc D.  
TITLE OF INVENTION: Methods for Recombinant Microbial Production of  
Fusion Proteins and BPI-Derived Peptides  
NUMBER OF SEQUENCES: 265

CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/765,527  
FILING DATE: 18-Jan-2001  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/621,803  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Borun, Michael F.  
REGISTRATION NUMBER: 25,447  
REFERENCE/DOCKET NUMBER: 27129/33199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856

INFORMATION FOR SEQ ID NO: 263:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 195 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 263:  
US-09-765-527-263

Query Match 100.0%; Score 111; DB 9; Length 195;  
Best Local Similarity 100.0%; Pred. No. 6,9e-07;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKCCAPQLNLAIS 20  
DB 116 INPETHKCCAPQLNLAIS 135

RESULT 41  
US-08-957-425-11  
Sequence 11, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.

TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988

ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMOND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-08-957-425-11

Query Match 100.0%; Score 111; DB 8; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.1e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKCCAPQLNLAIS 20  
DB 272 INPETHKCCAPQLNLAIS 291

RESULT 42  
US-10-321-799-11  
Sequence 11, Application US/10321799  
Publication No. US2003022496A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.

TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON



STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA: US/10/321,799  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,513  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/222,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STX-001CPEC3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO. 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-10-321-799-11  
Query Match 100.0%; Score 111; DB 14; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1,1e-06;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETYKPCCAPTQMAIS 20  
DB 272 INPETYKPCCAPTQMAIS 291  
RESULT 43  
US-10-428-997A-11  
Sequence 11, Application US/10428997A  
Publication No. US2004007546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMEPATH, THANAGAVEL  
RUEGER, DAVID C.  
PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURNITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA: US/10/428,997A  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,513  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699

FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STK-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 317 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-10-428-997A-11

Query Match 100.0%; Score 111; DB 15; Length 317;  
Best Local Similarity 100.0%; Pred. No. 1.1e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYPRCCAPTQLNIAIS 20  
DB 272 INPETYPRCCAPTQLNIAIS 291

RESULT 44  
US-08-957-425-15  
Sequence 15, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990

APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 15:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-08-957-425-15

Query Match 100.0%; Score 111; DB 8; Length 408;  
Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYPRCCAPTQLNIAIS 20  
DB 363 INPETYPRCCAPTQLNIAIS 382

RESULT 45  
US-10-321-799-15  
Sequence 15, Application US/10321799  
Publication No. US2003022496A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMANN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925

KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <unknown>

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989

ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STR-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100

SEQUENCE CHARACTERISTICS:

LENGTH: 408 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 15:  
US-10-428-997A-15

Query Match 100.0%; Score 111; DB 15; Length 408;  
Best Local Similarity 100.0%; Pred. No. 1.4e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 363 INPETHKPCCAPTQNLNALS 382

RESULT 47  
US-10-367-094-171  
Sequence 171, Application US/10367094  
Publication No. US20040170982A1  
GENERAL INFORMATION:  
APPLICANT: David W. Morris  
APPLICANT: Marc Malandro  
TITLE OF INVENTION: Novel Therapeutic Targets in Cancer  
FILE REFERENCE: 529452001500  
CURRENT APPLICATION NUMBER: US/10/367,094  
CURRENT FILING DATE: 2003-02-14  
NUMBER OF SEQ ID NOS: 203  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO: 171  
LENGTH: 427  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-367-094-171

Query Match 100.0%; Score 111; DB 16; Length 427;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 382 INPETHKPCCAPTQNLNALS 401

RESULT 48  
US-10-367-094-175  
Sequence 175, Application US/10367094  
Publication No. US20040170982A1  
GENERAL INFORMATION:  
APPLICANT: David W. Morris  
APPLICANT: Marc Malandro  
TITLE OF INVENTION: Novel Therapeutic Targets in Cancer  
FILE REFERENCE: 529452001500  
CURRENT APPLICATION NUMBER: US/10/367,094  
CURRENT FILING DATE: 2003-02-14  
NUMBER OF SEQ ID NOS: 203  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO: 175  
LENGTH: 427  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-367-094-175

Query Match 100.0%; Score 111; DB 16; Length 427;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 382 INPETHKPCCAPTQNLNALS 401

RESULT 49

US-08-822-186-2  
Sequence 2, Application US/08822186  
Publication No. US20010014662A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, David C.  
APPLICANT: RUEGER, Marjorie M.  
TITLE OF INVENTION: IMPROVED OSTEOGENIC DEVICES AND METHODS  
OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE AND  
TITLE OF INVENTION: OSTEOCHONDRAL DEFECTS  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/822,186  
FILING DATE:  
CLASSIFICATION: 530  
ATTORNEY/AGENT INFORMATION:  
NAME: VITO CHRISTINE C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: CRP-137  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-822-186-2

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNALS 20  
DB 366 INPETHKPCCAPTQNLNALS 405

RESULT 50  
US-08-937-755-2  
Sequence 2, Application US/08937755  
Publication No. US20020049159A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
APPLICANT: SAMPATH, KOBER T.  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TREATMENT OF MOTOR NEURON INJURY AND NEUROPATHY  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESS: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/937,755  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-155  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7013  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-937-755-2

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLAIS 20  
DB 386 INPETYKPCCAPTQNLAIS 405

RESULT 51  
US-08-957-425-2  
Sequence 2, Application US/08957425  
Publication No. US20030069401A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-Oct-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374

FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-08-957-425-2

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQNLAIS 20  
DB 386 INPETYKPCCAPTQNLAIS 405

RESULT 52  
US-08-260-675-17  
Sequence 17, Application US/08260675  
Publication No. US2003010493A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY H.  
APPLICANT: COHEN, CHARLES M.  
TITLE OF INVENTION: WOUND-INDUCED NERVE REGENERATION AND  
REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:

CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 17:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-260-675-17

Query Match 100.0%; Score 111; DB 8; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
DB 386 INPETHKPCCAPTQNLNLS 405

RESULT 53  
US-09-045-331-2  
Sequence 2, Application US/09045331  
Patent No. US20010016646A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, David C.  
APPLICANT: TUCKER, Marjorie M.  
TITLE OF INVENTION: IMPROVED OSTEOGENIC DEVICES AND METHODS  
TITLE OF INVENTION: OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE AND  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/045,331  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/822,186  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: VITO, CHRISTINE C  
REGISTRATION NUMBER: 39,061  
REFERENCE/DOCKET NUMBER: CRP-137  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000

TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-045-331-2

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
DB 386 INPETHKPCCAPTQNLNLS 405

RESULT 54  
US-09-828-607-2  
Sequence 2, Application US/09828607  
Patent No. US20010024823A1  
GENERAL INFORMATION:  
APPLICANT: STRYKER CORPORATION  
TITLE OF INVENTION: REPAIR OF LARYNX, TRACHEA, AND OTHER FIBROCARITLAGINOUS  
TITLE OF INVENTION: TISSUES  
FILE REFERENCE: STK-070 PCT  
CURRENT APPLICATION NUMBER: US/09/828,607  
CURRENT FILING DATE: 2001-04-06  
NUMBER OF SEQ ID NOS: 9  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 2  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-828-607-2

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNLS 20  
DB 386 INPETHKPCCAPTQNLNLS 405

RESULT 55  
US-09-887-901-2  
Sequence 2, Application US/09887901  
Publication No. US20020091077A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, David C  
APPLICANT: TUCKER, Marjorie M  
TITLE OF INVENTION: MATRIX-FREE OSTEOGENIC DEVICES, IMPLANTS AND  
METHODS OF USE THEREOF  
NUMBER OF SEQUENCES: 8  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: James F. Haley, Jr., Esq. c/o FISH & NEAVE  
STREET: 1251 Avenue of the Americas  
CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10020  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EBO)  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/887,901  
FILING DATE: 22-Jun-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: 09/019,339  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: James F. Haley, Jr., Esq.  
REGISTRATION NUMBER: 27,794  
REFERENCE/DOCKET NUMBER: CRP-147  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212)596-9090  
TELEFAX: (212)596-9090  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-09-887-901-2

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNMAIS 20  
DB 386 INPETYKPCCAPTQLNMAIS 405

RESULT 56  
US-09-982-543A-10  
Sequence 10, Application US/09982543A  
Patent No US20020155500A1  
GENERAL INFORMATION:  
APPLICANT: DiJke, P.  
APPLICANT: Miyazano, K.  
APPLICANT: Sampath, K.  
APPLICANT: Heidlin, C.  
TITLE OF INVENTION: MORPHOGENIC PROTEIN-SPECIFIC CELL SURFACE RECEPTORS AND USES  
TITLE OF INVENTION: THEREFOR  
FILE REFERENCE: CIBT-P04-543  
CURRENT APPLICATION NUMBER: US/09/982,543A  
CURRENT FILING DATE: 2001-10-18  
PRIOR APPLICATION NUMBER: 08/448,371  
PRIOR FILING DATE: 1995-06-02  
NUMBER OF SEQ ID NOS: 15  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 10  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-982-543A-10

Query Match 100.0%; Score 111; DB 9; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNMAIS 20  
DB 386 INPETYKPCCAPTQLNMAIS 405

RESULT 57  
US-09-039-107-2  
Sequence 2, Application US/09039107  
Publication No. US20030032586A1  
GENERAL INFORMATION:  
APPLICANT: David C. Rueger and Marjorie M. Tucker  
TITLE OF INVENTION: COMPOSITIONS FOR MORPHOGEN-INDUCED  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: FISH & NEAVE  
STREET: 1250 AVENUE OF THE AMERICAS  
CITY: NEW YORK

STATE: NY  
COUNTRY: USA  
ZIP: 10020  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/039,107  
FILING DATE: 14 Mar 1998  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:  
NAME: Z. YING LI  
REGISTRATION NUMBER: 42,800  
REFERENCE/DOCKET NUMBER: STX-068 (CRP-112)  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212) 596-9000  
TELEFAX: (212) 596-9090  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-039-107-2

Query Match 100.0%; Score 111; DB 10; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNMAIS 20  
DB 386 INPETYKPCCAPTQLNMAIS 405

RESULT 58  
US-09-798-518-1  
Sequence 1, Application US/09798518  
Publication No. US20030049328A1  
GENERAL INFORMATION:  
APPLICANT: DALAL, PARISH S.  
APPLICANT: DIMANNO, GODOFREDO R.  
APPLICANT: TOTH, CAROL ANN  
APPLICANT: KULKARNI, SHALISH C.  
TITLE OF INVENTION: POROUS BETA-TRICALCIUM PHOSPHATE GRANULES AND METHODS  
TITLE OF INVENTION: FOR PRODUCING SAME  
FILE REFERENCE: STX-8  
CURRENT APPLICATION NUMBER: US/09/798,518  
CURRENT FILING DATE: 2001-03-02  
NUMBER OF SEQ ID NOS: 9  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 1  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-798-518-1

Query Match 100.0%; Score 111; DB 10; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTQLNMAIS 20  
DB 386 INPETYKPCCAPTQLNMAIS 405

RESULT 59  
US-09-540-466-2  
Sequence 2, Application US/09540466  
Publication No. US20030104577A1  
GENERAL INFORMATION:  
APPLICANT: RUPAMONTI, UGO

```

; APPLICANT: RAMOSHEB, LENTSHA N.
; TITLE OF INVENTION: METHODS FOR INDUCING ANGIOGENESIS USING MORPHOGENIC
; FILE OF INVENTION: METHODS AND STIMULATORY FACTORS
; FILE REFERENCE: STR-6
; CURRENT APPLICATION NUMBER: US/09/540,466
; NUMBER OF SEQ ID NOS: 10
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 2
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-540-466-2

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 60
US-09-423-943-2
; Sequence 2, Application US/09423943
; Publication No. US20030109686A1
; GENERAL INFORMATION:
; APPLICANT: Sampath, Kuber T.
; APPLICANT: Cohen, Charles M.
; TITLE OF INVENTION: Methods For Tissue Morphogenesis and Methods for
; FILE REFERENCE: Evaluating Morphogenic Activity
; CURRENT APPLICATION NUMBER: US/09/423,943
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 2
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-423-943-2

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 61
US-09-012-846-2
; Sequence 2, Application US/09012846
; Publication No. US20030170213A1
; GENERAL INFORMATION:
; APPLICANT: Marc F. Charette
; TITLE OF INVENTION: Methods and Compositions for Enhancing Cognitive Function us
; NUMBER OF SEQUENCES: 9
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CREATIVE BIOMOLECULES, INC
; STREET: 45 SOUTH STREET
; CITY: HOPKINTON
; STATE: MA
; COUNTRY: USA
; ZIP: 01748
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
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; APPLICATION NUMBER: US/09/012,846
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Thomas C. Meyers
; REGISTRATION NUMBER:
; REFERENCE/DOCKET NUMBER: CRP-141
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 248-7000
; TELEFAX: (617) 248-7100
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 431 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-012-846-2

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 62
US-09-960-789-1
; Sequence 1, Application US/09960789
; Publication No. US20030180376A1
; GENERAL INFORMATION:
; APPLICANT: DALAL, PARESH S.
; APPLICANT: DIMANCO, GODOFREDO R.
; APPLICANT: TOTI, CAROL ANN
; APPLICANT: KULKARNI, SHALISH C.
; TITLE OF INVENTION: POROUS BETA-TRICALCIUM PHOSPHATE GRANULES AND METHODS
; FILE REFERENCE: FOR PRODUCING SAME
; CURRENT APPLICATION NUMBER: US/09/960,789
; PRIOR FILING DATE: 2001-09-21
; NUMBER OF SEQ ID NOS: 09/798,518
; NUMBER OF SEQ ID NOS: 2001-03-02
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 1
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-960-789-1

Query Match
Best Local Similarity 100.0%; Score 111; DB 10; Length 431;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20
DB 386 INPETHKPCCAPTOLNAIS 405

RESULT 63
US-09-952-318A-17
; Sequence 17, Application US/09952318A
; Publication No. US20030224979A1
; GENERAL INFORMATION:
; APPLICANT: Kuberampath et al.
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN
; FILE REFERENCE: METABOLIC BONE DISEASE
; CURRENT APPLICATION NUMBER: US/09/952,318A
; PRIOR FILING DATE: 2001-09-13
; PRIOR APPLICATION NUMBER: 09/170,936
; PRIOR FILING DATE: 1998-10-13
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us-10-619-910-11.oct24.rapb

Page 25

PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO: 17  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-952-318A-17

Query Match 100.0%; Score 111; DB 10; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 386 INPETYKPCCAPTOLNAIS 405

RESULT 64  
US-10-062-370-5  
Sequence 5, Application US/10062370  
Publication No. US20030022830A1  
GENERAL INFORMATION:

APPLICANT: CHARITTE, Marc F.  
FINKLESTEIN, Seth P.  
TITLE OF INVENTION: METHODS FOR ENHANCING FUNCTIONAL  
RECOVERY FOLLOWING CENTRAL NERVOUS SYSTEM ISCHEMIA OR  
TRAUMA

NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSER: CREATIVE BIOMOLECULES, INC  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/062,370  
FILING DATE: 01-Feb-2002  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/828,281  
FILING DATE: 1997-MAR-21  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON, GILLIAN M  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-069CP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7000  
TELEFAX: (617) 248-7100  
INFORMATION FOR SEQ ID NO: 5:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 5:  
US-10-062-370-5

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 386 INPETYKPCCAPTOLNAIS 405

RESULT 65  
US-10-083-825-2  
Sequence 2, Application US/10083825  
Publication No. US20030064090A1  
GENERAL INFORMATION:

APPLICANT: KHOURI, ROGER K.  
SAMPATH, KUBER T.  
RUEGER, DAVID C.  
TITLE OF INVENTION: MANUFACTURE OF AUTOGENOUS REPLACEMENT  
BODY PARTS

NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSER: TESTA, HURWITZ & THIBEAULT  
STREET: 53 STATE STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/083,825  
FILING DATE: 27-Feb-2002  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/459,129  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: KELLEY, ROBIN D.  
REGISTRATION NUMBER: 34,637  
REFERENCE/DOCKET NUMBER: CRP-101  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100

SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-083-825-2

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 386 INPETYKPCCAPTOLNAIS 405

RESULT 66  
US-10-122-026-2  
Sequence 2, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMANN, HERMANN

OZKAYNAK, ENGIN  
KUBERASAPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
THIBEAULT LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-Aug-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992  
APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STK-0600CN  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-122-026-2  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-122-026-2  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPKPCAPTLNLAIS 20  
DB 386 INPETHPKPCAPTLNLAIS 405  
RESULT 67  
US-10-272-503-2  
Sequence 2, Application US/10272503  
Publication No. US20030109445A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C.  
SAPAPATH, KOBBER T.  
OPPERMANN, HERMANN

PANG, ROY H. L.  
COHEN, CHARLES M.  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE  
TREATMENT AND PREVENTION OF PARKINSON'S DISEASE  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
THIBEAULT LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/272,503  
FILING DATE: 16-Oct-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/938,622  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: MEYERS, THOMAS C.  
REGISTRATION NUMBER: 36,989  
REFERENCE/DOCKET NUMBER: CRP-128  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617) 248-7100  
TELEFAX: (617) 248-7013  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-272-503-2  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPKPCAPTLNLAIS 20  
DB 386 INPETHPKPCAPTLNLAIS 405  
RESULT 68  
US-10-050-050-17  
Sequence 17, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARETTE, MARC F.  
KUBERASAPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H. L.  
OZKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
  APPLICATION NUMBER: US/10/050,050
  FILING DATE: 15-Jan-2002
  CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US/08/461,113
  FILING DATE: <Unknown>
  APPLICATION NUMBER: US 08/445,882
  FILING DATE: 22-MAY-1995
ATTORNEY/AGENT INFORMATION:
  NAME: FENTON Esq., GILFILLAN M.
  REGISTRATION NUMBER: 36,508
  REFERENCE/DOCKET NUMBER: CRP-074DV
TELECOMMUNICATION INFORMATION:
  TELEPHONE: (508) 435-9001
  TELEFAX: (508) 435-6951
INFORMATION FOR SEQ ID NO: 17:
  SEQUENCE CHARACTERISTICS:
    LENGTH: 431 amino acids
    TYPE: amino acid
    TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 17:
US-10-050-050-17

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 69
US-10-286-152A-8
; Sequence 8, Application US/10286152A
; Publication No. US20030134308A1
; GENERAL INFORMATION:
; APPLICANT: Alcon Research, Ltd.
; TITLE OF INVENTION: Bone Morphogenic Proteins (BMP), BMP Receptors and BMP Binding Pr
; TITLE OF INVENTION: and Their Use in the Diagnosis and Treatment of Glaucoma
; FILE REFERENCE: 2312 US
; CURRENT APPLICATION NUMBER: US/10/286,152A
; CURRENT FILING DATE: 2002-02-28
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 8
; LENGTH: 431
; TYPE: PRT
; ORGANISM: homo sapiens
US-10-286-152A-8

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 70
US-10-301-822-10
; Sequence 10, Application US/10301822
; Publication No. US20030148410A1
; GENERAL INFORMATION:
```

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APPLICANT: Millennium Pharmaceuticals, Inc.
APPLICANT: Berger, Allison
APPLICANT: Guillemette, Tracy L.
APPLICANT: Kametkar, Shubhangi
APPLICANT: Kametkar, Robert
APPLICANT: Monahan, John E.
APPLICANT: Thibodeau, Stephen N.
APPLICANT: Burgart, Lawrence J.
TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS, AND
TITLE OF INVENTION: METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
FILE REFERENCE: MP01-02922RNM
CURRENT APPLICATION NUMBER: US/10/301,822
CURRENT FILING DATE: 2002-11-21
PRIOR APPLICATION NUMBER: US 60/339,971
PRIOR FILING DATE: 2001-12-10
PRIOR APPLICATION NUMBER: US 60/361,978
PRIOR FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: US 60/381,988
PRIOR FILING DATE: 2002-05-20
NUMBER OF SEQ ID NOS: 228
SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-301-822-10

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 71
US-10-366-345-39
; Sequence 39, Application US/10366345
; Publication No. US20030224501A1
; GENERAL INFORMATION:
; APPLICANT: Young, et al.
; TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and
; TITLE OF INVENTION: Antibodies
; FILE REFERENCE: PT189
; CURRENT APPLICATION NUMBER: US/10/366,345
; CURRENT FILING DATE: 2003-02-14
; NUMBER OF SEQ ID NOS: 77
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 39
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-366-345-39

Query Match      100.0%; Score 111; DB 14; Length 431;
Best Local Similarity 100.0%; Pred. No. 1.5e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNLAIS 20
DB      386 INPETHKPCCAPTQLNLAIS 405

RESULT 72
US-10-321-799-2
; Sequence 2, Application US/10321799
; Publication No. US20030224996A1
; GENERAL INFORMATION:
APPLICANT: OPPERMAN, HERMANN
OZKAYNAK, ENGIN
KUBERASAMPATH, THIANGAVEL
```

RUEGER, DAVID C.  
PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids

US-10-321-799-2  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPKPCAPTDLNAIS 20  
DB 386 INPETHPKPCAPTDLNAIS 405  
RESULT 73  
US-10-295-027-518  
Sequence 518, Application US/10295027  
Publication No. US20030232350A1  
GENERAL INFORMATION:  
APPLICANT: Afar, Daniel  
APPLICANT: Aziz, Natasha  
APPLICANT: Ginsberg, Wendy M.  
APPLICANT: Gish, Kurt C.  
APPLICANT: Glynn, Richard  
APPLICANT: Hevez, Peter A.  
APPLICANT: Mack, David H.  
APPLICANT: Murray, Richard  
APPLICANT: Watson, Susan R.  
APPLICANT: Eos Biotechnology, Inc.  
TITLE OF INVENTION: Methods of diagnosis of Cancer, Compositions and  
TITLE OF INVENTION: Methods of Screening for Modulators of Cancer  
FILE REFERENCE: 018501-012500US  
CURRENT APPLICATION NUMBER: US/10/295,027  
CURRENT FILING DATE: 2002-11-13  
PRIOR APPLICATION NUMBER: US 09/663,733  
PRIOR FILING DATE: 2000-09-15  
PRIOR APPLICATION NUMBER: US 60/350,666  
PRIOR FILING DATE: 2001-11-13  
PRIOR APPLICATION NUMBER: US 60/335,394  
PRIOR FILING DATE: 2001-11-15  
PRIOR APPLICATION NUMBER: US 60/332,464  
PRIOR FILING DATE: 2001-11-21  
PRIOR APPLICATION NUMBER: US 60/334,393  
PRIOR FILING DATE: 2001-11-29  
PRIOR APPLICATION NUMBER: US 60/340,376  
PRIOR FILING DATE: 2001-12-14  
PRIOR APPLICATION NUMBER: US 60/347,211  
PRIOR FILING DATE: 2002-01-08  
PRIOR APPLICATION NUMBER: US 60/347,349  
PRIOR FILING DATE: 2002-01-10  
PRIOR APPLICATION NUMBER: US 60/355,250  
PRIOR FILING DATE: 2002-02-08  
PRIOR APPLICATION NUMBER: US 60/356,714  
PRIOR FILING DATE: 2002-02-13  
Remaining Prior Application data removed - See file wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1386  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 518  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-295-027-518  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 INPETHPKPCAPTDLNAIS 20  
DB 386 INPETHPKPCAPTDLNAIS 405

RESULT 74  
US-10-295-027-787  
; Sequence 787, Application US/10295027  
; Publication No. US2003023350A1  
; GENERAL INFORMATION:  
; APPLICANT: Afar, Daniel  
; APPLICANT: Aziz, Natasha  
; APPLICANT: Ginsberg, Wendy M.  
; APPLICANT: Gish, Kurt C.  
; APPLICANT: Glynn, Richard  
; APPLICANT: Hevezl, Peter A.  
; APPLICANT: Mack, David H.  
; APPLICANT: Murray, Richard  
; APPLICANT: Watson, Susan R.  
; APPLICANT: Eos Biotechnology, Inc.  
; TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and  
; TITLE OF INVENTION: Methods of Screening for Modulators of Cancer  
; FILE REFERENCE: 018501-012500US  
; CURRENT FILING DATE: 2002-11-13  
; PRIOR FILING DATE: 2002-11-13  
; PRIOR APPLICATION NUMBER: US 09/663,733  
; PRIOR FILING DATE: 2000-09-15  
; PRIOR APPLICATION NUMBER: US 60/350,666  
; PRIOR FILING DATE: 2001-11-13  
; PRIOR APPLICATION NUMBER: US 60/335,394  
; PRIOR FILING DATE: 2001-11-15  
; PRIOR APPLICATION NUMBER: US 60/332,464  
; PRIOR FILING DATE: 2001-11-21  
; PRIOR APPLICATION NUMBER: US 60/334,393  
; PRIOR FILING DATE: 2001-11-29  
; PRIOR APPLICATION NUMBER: US 60/340,376  
; PRIOR FILING DATE: 2001-12-14  
; PRIOR APPLICATION NUMBER: US 60/347,211  
; PRIOR FILING DATE: 2002-01-08  
; PRIOR APPLICATION NUMBER: US 60/347,349  
; PRIOR FILING DATE: 2002-01-10  
; PRIOR APPLICATION NUMBER: US 60/355,250  
; PRIOR FILING DATE: 2002-02-08  
; PRIOR APPLICATION NUMBER: US 60/356,714  
; PRIOR FILING DATE: 2002-02-13  
; PRIOR APPLICATION NUMBER: US 60/356,714  
; REMAINING PRIOR APPLICATION data removed - See File Wrapper or PALM.  
; NUMBER OF SEQ ID NOS: 1386  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO: 787  
; LENGTH: 431  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-295-027-787  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 75  
US-10-295-027-806  
; Sequence 806, Application US/10295027  
; Publication No. US2003023350A1  
; GENERAL INFORMATION:  
; APPLICANT: Afar, Daniel  
; APPLICANT: Aziz, Natasha  
; APPLICANT: Ginsberg, Wendy M.  
; APPLICANT: Gish, Kurt C.  
; APPLICANT: Glynn, Richard  
; APPLICANT: Hevezl, Peter A.  
; APPLICANT: Mack, David H.  
; APPLICANT: Murray, Richard  
; APPLICANT: Watson, Susan R.  
; APPLICANT: Eos Biotechnology, Inc.  
; TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and  
; TITLE OF INVENTION: Methods of Screening for Modulators of Cancer  
; FILE REFERENCE: 018501-012500US  
; CURRENT FILING DATE: 2002-11-13  
; PRIOR FILING DATE: 2002-11-13  
; PRIOR APPLICATION NUMBER: US 09/663,733  
; PRIOR FILING DATE: 2000-09-15  
; PRIOR APPLICATION NUMBER: US 60/350,666  
; PRIOR FILING DATE: 2001-11-13  
; PRIOR APPLICATION NUMBER: US 60/335,394  
; PRIOR FILING DATE: 2001-11-15  
; PRIOR APPLICATION NUMBER: US 60/332,464  
; PRIOR FILING DATE: 2001-11-21  
; PRIOR APPLICATION NUMBER: US 60/334,393  
; PRIOR FILING DATE: 2001-11-29  
; PRIOR APPLICATION NUMBER: US 60/340,376  
; PRIOR FILING DATE: 2001-12-14  
; PRIOR APPLICATION NUMBER: US 60/347,211  
; PRIOR FILING DATE: 2002-01-08  
; PRIOR APPLICATION NUMBER: US 60/355,250  
; PRIOR FILING DATE: 2002-02-08  
; PRIOR APPLICATION NUMBER: US 60/356,714  
; REMAINING PRIOR APPLICATION data removed - See File Wrapper or PALM.  
; NUMBER OF SEQ ID NOS: 1386  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO: 806  
; LENGTH: 431  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-295-027-806  
Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

PRIOR APPLICATION NUMBER: US 60/340,376  
PRIOR FILING DATE: 2001-12-14  
PRIOR APPLICATION NUMBER: US 60/347,211  
PRIOR FILING DATE: 2002-01-08  
PRIOR APPLICATION NUMBER: US 60/347,349  
PRIOR FILING DATE: 2002-01-10  
PRIOR APPLICATION NUMBER: US 60/355,250  
PRIOR FILING DATE: 2002-02-08  
PRIOR APPLICATION NUMBER: US 60/356,714  
PRIOR FILING DATE: 2002-02-13  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1386  
SOFTWARE: Patent In Ver. 2.1  
SEQ ID NO: 843  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-295-027-843

Query Match 100.0%; Score 111; DB 14; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOINIS 20  
Db 386 INPETHKPCAPTOINIS 405

RESULT 77  
US-10-375-150-6  
Sequence 6, Application US/10375150  
Publication No. US20030235888A1  
GENERAL INFORMATION:  
APPLICANT: Israel, David  
APPLICANT: Wolfman, Neil M.  
TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein  
TITLE OF INVENTION: Heterodimers, Compositions and Methods of Use.  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Legal Affairs, Genetics Institute, Inc.  
STREET: 87 Cambridgepark Drive  
CITY: Cambridge  
STATE: MA  
COUNTRY: USA  
ZIP: 02140-2387  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Tape  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/375,150  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/989,847  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Kapinos, Ellen J.  
REGISTRATION NUMBER: 32,245  
REFERENCE/DOCKET NUMBER: GI-51928  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-876-1170  
TELEFAX: 617-876-5851  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-10-375-150-6

Query Match 100.0%; Score 111; DB 14; Length 431;

Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Qy 1 INPETHKPCAPTOINIS 20  
Db 386 INPETHKPCAPTOINIS 405

RESULT 78  
US-10-173-999-58  
Sequence 58, Application US/10173999  
Publication No. US20040005563A1  
GENERAL INFORMATION:  
APPLICANT: Mack, David H.  
APPLICANT: Gish, Kurt C.  
APPLICANT: Eos Biotechnology, Inc.  
TITLE OF INVENTION: Methods of Diagnosis of Ovarian Cancer, Compositions  
TITLE OF INVENTION: and Methods of Screening for Modulators of Ovarian  
TITLE OF INVENTION: Cancer  
FILE REFERENCE: 018501-002420US  
CURRENT APPLICATION NUMBER: US/10/173,999  
CURRENT FILING DATE: 2002-06-17  
PRIOR APPLICATION NUMBER: US 60/299,234  
PRIOR FILING DATE: 2001-06-18  
PRIOR APPLICATION NUMBER: US 60/315,287  
PRIOR FILING DATE: 2001-08-27  
PRIOR APPLICATION NUMBER: US 60/350,666  
PRIOR FILING DATE: 2001-11-13  
PRIOR APPLICATION NUMBER: US 60/372,246  
PRIOR FILING DATE: 2001-04-12  
NUMBER OF SEQ ID NOS: 163  
SOFTWARE: Patent In Ver. 2.1  
SEQ ID NO: 58  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-173-999-58

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCAPTOINIS 20  
Db 386 INPETHKPCAPTOINIS 405

RESULT 79  
US-10-428-275-6  
Sequence 6, Application US/10428275  
Publication No. US20040067505A1  
GENERAL INFORMATION:  
APPLICANT: Alvarez et al.  
TITLE OF INVENTION: THERAPEUTIC POLYPEPTIDES, NUCLEIC ACIDS ENCODING SAME, AND METHODS  
FILE REFERENCE: 21402-585  
CURRENT APPLICATION NUMBER: US/10/428,275  
CURRENT FILING DATE: 2003-05-01  
PRIOR APPLICATION NUMBER: 09/966545  
PRIOR FILING DATE: 2001-09-26  
PRIOR APPLICATION NUMBER: 09/544511  
PRIOR FILING DATE: 2000-04-06  
PRIOR APPLICATION NUMBER: 60/128514  
PRIOR FILING DATE: 1999-04-09  
PRIOR APPLICATION NUMBER: 09/569269  
PRIOR FILING DATE: 2000-05-11  
PRIOR APPLICATION NUMBER: 60/134315  
PRIOR FILING DATE: 1999-05-14  
PRIOR APPLICATION NUMBER: 09/619252  
PRIOR FILING DATE: 2000-07-19  
PRIOR APPLICATION NUMBER: 09/789390  
PRIOR FILING DATE: 2001-02-23  
PRIOR APPLICATION NUMBER: 60/185548  
PRIOR FILING DATE: 2000-02-25

NUMBER OF SEQ ID NOS: 450  
SOFTWARE: CureseqList version 0.1  
SEQ ID NO 6  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-428-275-6

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVPRCCAPTOLNAIS 20  
DB 386 INETVPRCCAPTOLNAIS 405

RESULT 80  
US-10-428-997A-2  
Sequence 2, Application US/10428997A  
Publication No. US2004007546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913

FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,659  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STK-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 431 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-428-997A-2

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVPRCCAPTOLNAIS 20  
DB 386 INETVPRCCAPTOLNAIS 405

RESULT 81  
US-10-302-812-28  
Sequence 28, Application US/10302812  
Publication No. US20040087016A1  
GENERAL INFORMATION:  
APPLICANT: Keating et al.  
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR CELL DIFFERENTIATION AND  
FILE REFERENCE: HYDR-P02-004  
CURRENT APPLICATION NUMBER: US/10/302,812  
CURRENT FILING DATE: 2002-11-21  
NUMBER OF SEQ ID NOS: 78  
SOFTWARE: Patent version 3.1  
SEQ ID NO 28  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-302-812-28

Query Match 100.0%; Score 111; DB 15; Length 431;  
Best Local Similarity 100.0%; Pred. No. 1.5e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 INETVPRCCAPTOLNAIS 20  
DB 386 INETVPRCCAPTOLNAIS 405

RESULT 82  
US-10-290-554-1  
Sequence 1, Application US/10290554  
Publication No. US20040093164A1  
GENERAL INFORMATION:

APPLICANT: Carlson, William D  
APPLICANT: Keck, Peter C  
TITLE OF INVENTION: COMPUTER SYSTEM AND METHODS FOR PRODUCING MORPHOGEN  
TITLE OF INVENTION: ANALOGS OF HUMAN TGF-1  
FILE REFERENCE: 24661-501  
CURRENT APPLICATION NUMBER: US/10/290,554  
CURRENT FILING DATE: 2002-11-08  
NUMBER OF SEQ ID NOS: 1  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO: 1  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-290-554-1

Query Match  
Best Local Similarity 100.0%; Score 111; DB 15; Length 431;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNALS 20  
Db 386 INPETHKPCCAPTQNLNALS 405

RESULT 83  
US-10-753-916-2  
Sequence 2, Application US/10753916  
Publication No. US20040138128A1  
GENERAL INFORMATION:  
APPLICANT: LEE, JOHN C.  
APPLICANT: YEH, LEE-CHUAN C.  
TITLE OF INVENTION: COMPOSITIONS AND THERAPEUTIC METHODS USING MORPHOGENIC  
TITLE OF INVENTION: PROTEINS, HORMONES AND HORMONE RECEPTORS  
FILE REFERENCE: SIX-4  
CURRENT APPLICATION NUMBER: US/10/753,916  
CURRENT FILING DATE: 2004-01-07  
PRIOR APPLICATION NUMBER: US/09/672,224A  
PRIOR FILING DATE: 2000-09-27  
PRIOR APPLICATION NUMBER: 60/156,261  
PRIOR FILING DATE: 1999-09-27  
NUMBER OF SEQ ID NOS: 14  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO: 2  
LENGTH: 431  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-753-916-2

Query Match  
Best Local Similarity 100.0%; Score 111; DB 16; Length 431;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNALS 20  
Db 386 INPETHKPCCAPTQNLNALS 405

RESULT 84  
US-09-361-741-3  
Sequence 3, Application US/09361741  
Patent No. US20020048784A1  
GENERAL INFORMATION:  
APPLICANT: HUDSON, PETER L  
APPLICANT: ROSEN, CRAIG A  
APPLICANT: HE, WEI WU  
TITLE OF INVENTION: PROSTATIC GROWTH FACTOR  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,  
ADDRESSEE: STEWART & OLSTEIN  
STREET: 6 BECKER FARM ROAD  
CITY: ROSELAND  
STATE: NJ

COUNTRY: US  
ZIP: 07068  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/361,741  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/411,607  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: FERRARO, GREGORY D  
REGISTRATION NUMBER: 36,134  
REFERENCE/DOCKET NUMBER: 325800-329  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (201) 994-1700  
TELEFAX: (201) 994-1744  
INFORMATION FOR SEQ ID NO: 3:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 432 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-361-741-3

Query Match  
Best Local Similarity 100.0%; Score 111; DB 9; Length 432;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNALS 20  
Db 387 INPETHKPCCAPTQNLNALS 406

RESULT 85  
US-10-270-377-3  
Sequence 3, Application US/10270377  
Publication No. US20030059431A1  
GENERAL INFORMATION:  
APPLICANT: Hudson, et al.  
TITLE OF INVENTION: Prostatic Growth Factor  
FILE REFERENCE: PFI49D2  
CURRENT APPLICATION NUMBER: US/10/270,377  
CURRENT FILING DATE: 2002-10-15  
PRIOR APPLICATION NUMBER: 09/361,741  
PRIOR FILING DATE: 1999-07-28  
PRIOR APPLICATION NUMBER: 09/461,418  
PRIOR FILING DATE: 1999-11-18  
PRIOR APPLICATION NUMBER: 08/411,607  
PRIOR FILING DATE: 1995-04-11  
PRIOR APPLICATION NUMBER: US94/14578  
PRIOR FILING DATE: 1994-12-15  
NUMBER OF SEQ ID NOS: 10  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO: 3  
LENGTH: 432  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-270-377-3

Query Match  
Best Local Similarity 100.0%; Score 111; DB 14; Length 432;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQNLNALS 20  
Db 387 INPETHKPCCAPTQNLNALS 406



Page 33

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      TOPOLOGY: linear
      MOLECULE TYPE: protein
      SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-08-957-425-13

Query Match      100.0%; Score 111; DB 8; Length 484;
Best Local Similarity 100.0%; Pred. No. 1,6e-06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0

QY      1 INPCTVPCCAPTOLNAIS 20
      11111111111111111111
Db      439 INPCTVPCCAPTOLNAIS 458

RESULT 87
US-10-321-799-13
; Sequence 13, Application US/10321799
; Publication No. US20030224966A1
GENERAL INFORMATION:
APPLICANT: OPPERMAN, HERMANN
          OZAYNAK, ENGIN
          KUBERASAMPATH, THANGAVEL
          RUEGER, DAVID C.
          PANG, ROY H. L.
TITLE OF INVENTION: OSTEOGENIC DEVICES
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESSES:
ADDRESSER: TESTA, HURWITZ & THIBEAULT
STREET: 125 HIGH STREET
CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: U.S.A.
ZIP: 02110

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/321,799
FILING DATE: 17-Dec-2002
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/148,925
FILING DATE: 8-SEP-1998
APPLICATION NUMBER: US 08/449,699
FILING DATE: 24-MAY-1995
APPLICATION NUMBER: US 08/147,023
FILING DATE: 1-NOV-1993
APPLICATION NUMBER: US 07/841,646
FILING DATE: 21-FEB-1992
APPLICATION NUMBER: US 07/827,052
FILING DATE: 28-JAN-1992
APPLICATION NUMBER: US 07/579,865
FILING DATE: 7-SEP-1990
APPLICATION NUMBER: US 07/621,849
FILING DATE: 4-DEC-1990
APPLICATION NUMBER: US 07/621,988
FILING DATE: 4-DEC-1990
APPLICATION NUMBER: US 07/810,560
FILING DATE: 20-DEC-1991
APPLICATION NUMBER: US 07/569,920
FILING DATE: 20-AUG-1990
APPLICATION NUMBER: US 07/600,024
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 07/599,543
FILING DATE: 18-OCT-1990
APPLICATION NUMBER: US 07/616,374
FILING DATE: 21-NOV-1990
APPLICATION NUMBER: US 07/483,913
FILING DATE: 22-FEB-1990
APPLICATION NUMBER: US 07/179,406
FILING DATE: 08-APR-1988

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APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STR-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-321-799-13

Query Match 100.0%; Score 111; DB 14; Length 484;  
Best Local Similarity 100.0%; Pred. No. 1.6e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHPCCAPTOLNAIS 20  
Db 439 INPETHPCCAPTOLNAIS 458

RESULT 88  
US-10-428-997A-13  
Sequence 13, Application US/10428997A  
Publication No. US2004007546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646

FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STR-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7100  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 484 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-428-997A-13

Query Match 100.0%; Score 111; DB 15; Length 484;  
Best Local Similarity 100.0%; Pred. No. 1.6e-06;  
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPETHPCCAPTOLNAIS 20  
Db 439 INPETHPCCAPTOLNAIS 458

RESULT 89  
US-08-260-675-6  
Sequence 6, Application US/08260675  
Publication No. US2003010493A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
KUBERASAMPATH, THANGAVEL  
OPPERMAN, HERMANN  
OZKAYNAK, ENGIN  
PANG, ROY H.L.  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
REPAIR

NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: MURIDAE  
TISSUE TYPE: EMBRYO  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label= MOP1-MATURE  
US-08-260-675-6

Query Match 97.3%; Score 108; DB 8; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.2e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INDETVPKPCAPTOLNMAIS 20  
DB 94 INDETVPKPCAPTOLNMAIS 113

RESULT 90  
US-09-952-318A-6  
Sequence 6, Application US/09952318A  
Publication No. US20030224979A1  
GENERAL INFORMATION:  
APPLICANT: Kuberamath et al.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
FILE REFERENCE: JCU-P06-522  
CURRENT APPLICATION NUMBER: US/09/952,318A  
CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936

PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 6  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-952-318A-6

Query Match 97.3%; Score 108; DB 10; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.2e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INDETVPKPCAPTOLNMAIS 20  
DB 94 INDETVPKPCAPTOLNMAIS 113

RESULT 91  
US-10-050-050-6  
Sequence 6, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARETTE, MARC F.  
KUBERAMATH, THANGAVEL  
RUBGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC COMPATIBLE  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-Jan-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FERTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 6:

## SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:

NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /note="MOP-1 (MATURE FORM)"

US-10-050-050-6  
SEQUENCE DESCRIPTION: SEQ ID NO: 6;

Query Match 97.3%; Score 108; DB 14; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.2e-06;

Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCCAPTOLNAIS 20  
Db 94 INPDTVPKPCCAPTOLNAIS 113

RESULT 92  
US-10-385-064-6

Sequence 6, Application US/10385064  
Publication No. US20040102373A1  
GENERAL INFORMATION:

APPLICANT: Cohen, Charles M.

APPLICANT: Kuberassampath, Thangavel

APPLICANT: Oppermann, Hermann

APPLICANT: Rueger, David C.

TITLE OF INVENTION: Protein Induced Morphogenesis

FILE REFERENCE: CBM-2 DIV (00960-502 DIV)

CURRENT APPLICATION NUMBER: US/10385,064

PRIOR FILING DATE: 2003-03-10

PRIOR APPLICATION NUMBER: US/09/464,206

PRIOR FILING DATE: 1999-12-15

PRIOR APPLICATION NUMBER: 08/396,684

PRIOR FILING DATE: 1995-03-01

NUMBER OF SEQ ID NOS: 16

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 6

LENGTH: 139

TYPE: PRT

ORGANISM: Murinae gen. sp.

FEATURE:

OTHER INFORMATION: tissue type embryo MOP1-MATURE

US-10-385-064-6

Query Match 97.3%; Score 108; DB 16; Length 139;  
Best Local Similarity 95.0%; Pred. No. 1.2e-06;

Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCCAPTOLNAIS 20  
Db 94 INPDTVPKPCCAPTOLNAIS 113

RESULT 93  
US-08-957-425-25

Sequence 25, Application US/08957425

Publication No. US20030069401A1

GENERAL INFORMATION:

APPLICANT: OPPERMANN, HERMANN

APPLICANT: OZKAYNAK, ENGIN

APPLICANT: KUBERASSAMPATH, THANGAVEL

APPLICANT: RUEGER, DAVID C.

APPLICANT: PANG, ROY H.L.

TITLE OF INVENTION: OSTEOGENIC DEVICES

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:  
ADDRESS: TESTA, HURWITZ & TRIBEAULT  
STREET: 53 STATE STREET

CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02109

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/957,425

FILING DATE: 24-Oct-1997

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/447,570

FILING DATE: 21-FEB-1992

APPLICATION NUMBER: US 810,560

FILING DATE: 20-DEC-1991

APPLICATION NUMBER: US 827,052

FILING DATE: 28-JAN-1992

APPLICATION NUMBER: US 660,162

FILING DATE: 22-FEB-1991

APPLICATION NUMBER: US 621,988

FILING DATE: 04-DEC-1990

APPLICATION NUMBER: US 621,949

FILING DATE: 04-DEC-1990

APPLICATION NUMBER: US 616,374

FILING DATE: 21-NOV-1990

APPLICATION NUMBER: US 600,024

FILING DATE: 18-OCT-1990

APPLICATION NUMBER: US 599,543

FILING DATE: 18-OCT-1990

APPLICATION NUMBER: US 579,865

FILING DATE: 07-SEP-1990

APPLICATION NUMBER: US 569,920

FILING DATE: 20-AUG-1990

APPLICATION NUMBER: US 483,913

FILING DATE: 22-FEB-1990

APPLICATION NUMBER: US 422,613

FILING DATE: 17-OCT-1989

APPLICATION NUMBER: US 315,342

FILING DATE: 23-FEB-1989

APPLICATION NUMBER: US 232,630

FILING DATE: 15-AUG-1988

APPLICATION NUMBER: US 179,460

FILING DATE: 08-APR-1988

ATTORNEY/AGENT INFORMATION:

NAME: PITCHER, EDMUND R.

REGISTRATION NUMBER: 27,829

REFERENCE/DOCKET NUMBER: CRP-001CP6

TELECOMMUNICATION INFORMATION:

TELEPHONE: 617/248-7000

TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 25:

SEQUENCE CHARACTERISTICS:

LENGTH: 430 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 25:

US-08-957-425-25

RESULT 94  
US-08-260-675-19

Query Match 97.3%; Score 108; DB 8; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPDTVPKPCCAPTOLNAIS 20  
Db 385 INPDTVPKPCCAPTOLNAIS 404

Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 37

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/ Sequence 19, Application US/08260675
/ Publication No. US20030104993A1
/ GENERAL INFORMATION:
/ APPLICANT: RUEGER, DAVID C
/ APPLICANT: KUBERASAMPATH, THANGAVEL
/ APPLICANT: OPPERMAN, HERMANN
/ APPLICANT: OKAYNAK, ENGIN
/ APPLICANT: PANG, ROY HL
/ APPLICANT: COHEN, CHARLES M
/ TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND
/ TITLE OF INVENTION: REPAIR
/ NUMBER OF SEQUENCES: 33
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: TESTA HURWITZ & THIBEAULT
/ STREET: 55 STATE STREET
/ CITY: BOSTON
/ STATE: MA
/ COUNTRY: USA
/ ZIP: 02140
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: Patent Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/260,675
/ FILING DATE:
/ CLASSIFICATION: 435
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US/08/126,100
/ FILING DATE:
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US/07/922,813
/ FILING DATE:
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US/07/667,274
/ FILING DATE: 11-MAR-1991
/ APPLICATION DATA: US 07/752,764
/ FILING DATE: 30-AUG-1991
/ ATTORNEY/AGENT INFORMATION:
/ NAME: PITCHER ESQ, EDMUND R
/ REGISTRATION NUMBER: 27,829
/ REFERENCE/DOCKET NUMBER: CRP-070
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 617/248-7000
/ TELEFAX: 617/248-7100
/ INFORMATION FOR SEQ ID NO: 19:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 430 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ US-08-260-675-19

Query Match          97.3%; Score 108; DB 8; Length 430;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
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QY 1 INPETHKPCCAPTQLNALS 20
DB 385 INPETHKPCCAPTQLNALS 404
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RESULT 95
US-09-952-318A-19
/ Sequence 19, Application US/09952318A
/ Publication No. US20030224979A1
/ GENERAL INFORMATION:
/ APPLICANT: Kuberampath et al.
/ TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN
/ TITLE OF INVENTION: METABOLIC BONE DISEASE
/ FILE REFERENCE: JJJ-P06-522
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/ CURRENT APPLICATION NUMBER: US/09/952,318A
/ CURRENT FILING DATE: 2001-09-13
/ PRIOR APPLICATION NUMBER: 09/170,936
/ PRIOR FILING DATE: 1998-10-13
/ PRIOR APPLICATION NUMBER: 08/432,883
/ PRIOR FILING DATE: 1995-05-02
/ PRIOR APPLICATION NUMBER: 08/115,914
/ PRIOR FILING DATE: 1993-09-01
/ PRIOR APPLICATION NUMBER: 07/923,780
/ PRIOR FILING DATE: 1992-07-31
/ PRIOR APPLICATION NUMBER: 07/752,847
/ PRIOR FILING DATE: 1991-08-30
/ PRIOR APPLICATION NUMBER: 07/667,274
/ PRIOR FILING DATE: 1991-03-11
/ NUMBER OF SEQ ID NOS: 33
/ SOFTWARE: Patent version 3.1
/ SEQ ID NO 19
/ LENGTH: 430
/ TYPE: PRT
/ ORGANISM: Mus musculus
/ US-09-952-318A-19

Query Match          97.3%; Score 108; DB 10; Length 430;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
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QY 1 INPETHKPCCAPTQLNALS 20
DB 385 INPETHKPCCAPTQLNALS 404
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RESULT 96
US-10-122-026-4
/ Sequence 4, Application US/10122026
/ Publication No. US20030105004A1
/ GENERAL INFORMATION:
/ APPLICANT: JONES, WILLIAM K
/ TUCKER, RONALD F
/ RUEGER, DAVID C
/ OPPERMAN, HERMANN
/ OKAYNAK, ENGIN
/ KUBERASAMPATH, THANGAVEL
/ TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS
/ OF MATTER
/ NUMBER OF SEQUENCES: 23
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Patent Administrator, Testa, Hurwitz &
/ Thibault, LLP
/ STREET: 125 HIGH STREET
/ CITY: BOSTON
/ STATE: MA
/ COUNTRY: USA
/ ZIP: 02110
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: Patent Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/10/122,026
/ FILING DATE: 29-AUG-2002
/ CLASSIFICATION: <unknown>
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 08/402,542
/ FILING DATE: 13-MAR-1995
/ APPLICATION NUMBER: US 08/840,510
/ FILING DATE: 31-MAR-1993
/ APPLICATION NUMBER: US 08/029,335
/ FILING DATE: 04-MAR-1993
/ APPLICATION NUMBER: US 07/971,091
/ FILING DATE: 03-NOV-1992
/ APPLICATION NUMBER: US 07/946,235
/ FILING DATE: 16-SEP-1992
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APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STR-060CN  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
US-10-122-026-4

Query Match 97.3%; Score 108; DB 14; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHPCCAPTOLNALS 20  
Db 385 INPETHPCCAPTOLNALS 404

RESULT 97  
US-10-050-050-19  
Sequence 19, Application US/10050050  
Publication No. US20030125230A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARETTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-Jan-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON EGG, GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 19:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 19:  
US-10-050-050-19

Query Match 97.3%; Score 108; DB 14; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Oy 1 INPETHPCCAPTOLNALS 20  
Db 385 INPETHPCCAPTOLNALS 404

RESULT 98  
US-10-321-799-25  
Sequence 25, Application US/10321799  
Publication No. US2003022496A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H.L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/321,799  
FILING DATE: 17-Dec-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 09/148,925  
FILING DATE: 8-SEP-1998  
APPLICATION NUMBER: US 08/449,699  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543

FILED DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: DIANA M. STEEL  
REGISTRATION NUMBER: 43,153  
REFERENCE/DOCKET NUMBER: STK-001CP6C3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 25:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 25:  
US-10-321-799-25  
Query Match 97.3%; Score 108; DB 14; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
Cy 1 INPETHPCCAPTOLNAIS 20  
Db 385 INPETHPCCAPTOLNAIS 404  
RESULT 99  
US-10-428-997A-25  
Sequence 25, Application US/10428997A  
Publication No. US20040077546A1  
GENERAL INFORMATION:  
APPLICANT: OPPERMAN, HERMANN  
OKAYANAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H. L.  
TITLE OF INVENTION: OSTEOGENIC DEVICES  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA, HURWITZ & THIBEAULT  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MASSACHUSETTS  
COUNTRY: U.S.A.  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA: US/10/428,997A  
APPLICATION NUMBER: US/10/428,997A  
FILING DATE: 02-May-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/957,425  
FILING DATE: 24-OCT-1997  
APPLICATION NUMBER: US 08/447,570  
FILING DATE: 23-MAY-1995  
APPLICATION NUMBER: US 08/147,023  
FILING DATE: 1-NOV-1993  
APPLICATION NUMBER: US 07/841,646  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 07/827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 07/579,865  
FILING DATE: 7-SEP-1990  
APPLICATION NUMBER: US 07/621,849  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/621,988  
FILING DATE: 4-DEC-1990  
APPLICATION NUMBER: US 07/810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 07/569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 07/600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 07/616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 07/483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 07/179,406  
FILING DATE: 08-APR-1988  
APPLICATION NUMBER: US 07/232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 07/315,342  
FILING DATE: 23-FEB-1989  
APPLICATION NUMBER: US 07/660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 07/422,699  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 07/422,623  
FILING DATE: 17-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BRIAN FAIRCHILD  
REGISTRATION NUMBER: 48,645  
REFERENCE/DOCKET NUMBER: STK-015C1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 25:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 430 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 25:  
US-10-428-997A-25  
Query Match 97.3%; Score 108; DB 15; Length 430;  
Best Local Similarity 95.0%; Pred. No. 3.6e-06;  
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
Cy 1 INPETHPCCAPTOLNAIS 20  
Db 385 INPETHPCCAPTOLNAIS 404  
RESULT 100  
US-10-302-812-26  
Sequence 26, Application US/10302812  
Publication No. US20040087016A1  
GENERAL INFORMATION:  
APPLICANT: Keating et al.

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; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR CELL DEDIFFERENTIATION AND
; FILE REFERENCE: TISSUE REGENERATION
; CURRENT APPLICATION NUMBER: US/10/302,812
; CURRENT FILING DATE: 2002-11-21
; NUMBER OF SEQ ID NOS: 78
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 26
; LENGTH: 430
; TYPE: PRT
; ORGANISM: Mus musculus
US-10-302-812-26

Query Match      97.3%; Score 108, DB 15, Length 430;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPDTVPKPCCAPTQLNLAIS 20
Db 385 INPDTVPKPCCAPTQLNLAIS 404

RESULT 101
US-10-385-064-16
; Sequence 16, Application US/10385064
; Publication No. US20040102373A1
; GENERAL INFORMATION:
; APPLICANT: Cohen, Charles M.
; APPLICANT: Kuderasampath, Thangavel
; APPLICANT: Oppermann, Hermann
; APPLICANT: Rueger, David C.
; TITLE OF INVENTION: Protein Induced Morphogenesis
; FILE REFERENCE: CEM-2 DIV (00960-502 DIV)
; CURRENT APPLICATION NUMBER: US/10/385,064
; CURRENT FILING DATE: 2003-03-10
; PRIOR APPLICATION NUMBER: US/09/464,206
; PRIOR FILING DATE: 1999-12-15
; PRIOR APPLICATION NUMBER: 08/396,684
; PRIOR FILING DATE: 1995-03-01
; NUMBER OF SEQ ID NOS: 16
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 16
; LENGTH: 430
; TYPE: PRT
; ORGANISM: Murinae gen. sp.
US-10-385-064-16

Query Match      97.3%; Score 108, DB 16, Length 430;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPDTVPKPCCAPTQLNLAIS 20
Db 385 INPDTVPKPCCAPTQLNLAIS 404

RESULT 102
US-09-784-911-12
; Sequence 12, Application US/09784911
; Patent No. US20020072115A1
; GENERAL INFORMATION:
; APPLICANT: Harrison, Leonard C.
; APPLICANT: Uiang, Fang-Xu
; APPLICANT: Stanley, Edouard Guy
; APPLICANT: Gonzalez, Leonel Jorge
; TITLE OF INVENTION: Pancreatic islet cell growth factors
; FILE REFERENCE: Davies Collision Cave
; CURRENT APPLICATION NUMBER: US/09/784,911
; CURRENT FILING DATE: 2001-09-17
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 2.1
; SEQ ID NO 12
; LENGTH: 433
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; TYPE: PRT
; ORGANISM: mouse
US-09-784-911-12

Query Match      97.3%; Score 108, DB 9, Length 433;
Best Local Similarity 95.0%; Pred. No. 3.6e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPDTVPKPCCAPTQLNLAIS 20
Db 388 INPDTVPKPCCAPTQLNLAIS 407

RESULT 103
US-09-784-911-14
; Sequence 14, Application US/09784911
; Patent No. US20020072115A1
; GENERAL INFORMATION:
; APPLICANT: Harrison, Leonard C.
; APPLICANT: Uiang, Fang-Xu
; APPLICANT: Stanley, Edouard Guy
; APPLICANT: Gonzalez, Leonel Jorge
; TITLE OF INVENTION: Pancreatic islet cell growth factors
; FILE REFERENCE: Davies Collision Cave
; CURRENT APPLICATION NUMBER: US/09/784,911
; CURRENT FILING DATE: 2001-09-17
; NUMBER OF SEQ ID NOS: 30
; SOFTWARE: PatentIn version 2.1
; SEQ ID NO 14
; LENGTH: 435
; TYPE: PRT
; ORGANISM: mouse
US-09-784-911-14

Query Match      97.3%; Score 108, DB 9, Length 435;
Best Local Similarity 95.0%; Pred. No. 3.7e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPDTVPKPCCAPTQLNLAIS 20
Db 390 INPDTVPKPCCAPTQLNLAIS 409

RESULT 104
US-10-367-094-168
; Sequence 168, Application US/10367094
; Publication No. US20040170982A1
; GENERAL INFORMATION:
; APPLICANT: David W. Morris
; APPLICANT: Marc Malandro
; TITLE OF INVENTION: Novel Therapeutic Targets in Cancer
; FILE REFERENCE: 529452001500
; CURRENT APPLICATION NUMBER: US/10/367,094
; CURRENT FILING DATE: 2003-02-14
; NUMBER OF SEQ ID NOS: 203
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 168
; LENGTH: 456
; TYPE: PRT
; ORGANISM: Mus musculus
US-10-367-094-168

Query Match      97.3%; Score 108, DB 16, Length 456;
Best Local Similarity 95.0%; Pred. No. 3.8e-06;
Matches 19; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Cy 1 INPDTVPKPCCAPTQLNLAIS 20
Db 411 INPDTVPKPCCAPTQLNLAIS 430

RESULT 105
US-10-122-026-14
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Tue Oct 26 09:17:06 2004

us-10-619-910-11.oct24.rapb

Page 41

Sequence 14, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMANN, HERMANN  
OZKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF NATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
OPERATING SYSTEM: IBM PC compatible  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-Aug-2002  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992  
APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STR-060CN  
INFORMATION FOR SEQ ID NO: 14:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 438 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..438  
OTHER INFORMATION: /note= "PRE-PRO-VGR1"  
PUBLICATION INFORMATION:  
AUTHORS: LYONS,  
JOURNAL: Proc. Natl. Acad. Sci. U.S.A.  
VOLUME: 86  
PAGES: 4554-4558  
DATE: 1989  
SEQUENCE DESCRIPTION: SEQ ID NO: 14:  
US-10-122-026-14

Query Match 93.7%; Score 104; DB 14; Length 438;  
Best Local Similarity 90.0%; Pred. No. 1.2e-05;  
Matches 18; Conservative 2; Mismatches 0; Indels 0; Gaps 0;  
DB 393 NMPEVPRCCAPTOLNLS 412  
QY 1 INPEVPRCCAPTOLNLS 20  
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DB 393 NMPEVPRCCAPTOLNLS 412  
RESULT 106  
US-10-029-386-29756  
Sequence 29756, Application US/10029386  
Publication No. US20030194704A1  
GENERAL INFORMATION:  
APPLICANT: Penn, Sharon G.  
APPLICANT: Rank, David R.  
APPLICANT: Hanzel, David K.  
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR G  
FILE REFERENCE: AEMICA-X-2  
CURRENT APPLICATION NUMBER: US/10/029,386  
CURRENT FILING DATE: 2001-12-20  
NUMBER OF SEQ ID NOS: 34288  
SOFTWARE: Anomax Sequence Listing Engine vers. 1.1  
SEQ ID NO 29756  
LENGTH: 49  
TYPE: PR  
ORGANISM: Homo sapiens  
FEATURE:  
OTHER INFORMATION: MAP TO CHR6.1  
OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 2  
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 1.6  
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 1.2  
OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.4  
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 0.91  
OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 0.87  
OTHER INFORMATION: SWISSPROT HIT: P20722, EVALU6 6.00e-24  
US-10-029-386-29756  
Query Match 87.4%; Score 97; DB 14; Length 49;  
Best Local Similarity 85.0%; Pred. No. 1.3e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
QY 1 INPEVPRCCAPTOLNLS 20  
:|||||:|||||:|||||:  
DB 5 NMPEVPRCCAPTOLNLS 24  
RESULT 107  
US-08-260-675-28  
Sequence 28, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMANN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY HL  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: FLOPPY disk  
COMPUTER: IBM PC compatible



ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050.050  
FILING DATE: 15-Jan-2002  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461.113  
FILING DATE: <unknown>  
APPLICATION NUMBER: US 08/445.882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON ESQ., GILLIAN M.  
REGISTRATION NUMBER: 36.508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 28:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /label= BMP6  
SEQUENCE DESCRIPTION: SEQ ID NO: 28:  
US-10-050-050-28  
Query Match 87.4%; Score 97; DB 14; Length 102;  
Best Local Similarity 85.0%; Pred. No. 2.5e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
CY 1 INPEYVPRKPCAPTKLMAIS 20  
Db 57 MNPEYVPRKPCAPTKLMAIS 76  
RESULT 111  
US-10-187-394-14  
Sequence 14, Application US/10187394  
Publication No. US20030176667A1  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESS: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187.394  
FILING DATE: 28-JUNE-2002  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496.398  
FILING DATE: 02-FEB-2000  
CLASSIFICATION:  
APPLICATION NUMBER: US 08/478.097  
FILING DATE: 07-JUN-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STR-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 14:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note= "BMP-6 SEQUENCE"  
US-10-187-394-14  
Query Match 87.4%; Score 97; DB 14; Length 102;  
Best Local Similarity 85.0%; Pred. No. 2.5e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
CY 1 INPEYVPRKPCAPTKLMAIS 20  
Db 57 MNPEYVPRKPCAPTKLMAIS 76  
RESULT 112  
US-09-813-398-29  
Sequence 29, Application US/09813398  
Patent No. US20020169292A1  
GENERAL INFORMATION:  
APPLICANT: Bruce D. Weintraub  
APPLICANT: Mariusz W. Szkludinski  
APPLICANT: University of Maryland  
TITLE OF INVENTION: CYSTEINE KNOT GROWTH FACTOR MUTANTS  
FILE REFERENCE: UOPMD.003C1  
CURRENT APPLICATION NUMBER: US/09/813.398  
CURRENT FILING DATE: 2001-03-20  
PRIOR APPLICATION NUMBER: PCT/US99/05908  
PRIOR FILING DATE: 1999-03-19  
PRIOR APPLICATION NUMBER: PCT/US98/19772  
PRIOR FILING DATE: 1998-09-22  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 29  
LENGTH: 112  
TYPE: PRT  
ORGANISM: HOMO SAPIEN  
US-09-813-398-29  
Query Match 87.4%; Score 97; DB 9; Length 112;  
Best Local Similarity 85.0%; Pred. No. 2.8e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
CY 1 INPEYVPRKPCAPTKLMAIS 20  
Db 68 MNPEYVPRKPCAPTKLMAIS 87

RESULT 113  
US-09-389-705-11  
Sequence 11, Application US/09389705  
Publication No. US20010018509A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: Vgr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-09-389-705-11  
Query Match 87.4%; Score 97; DB 9; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
Qy 1 INPETHPKCCAPTQNLNLS 20  
Do 73 NMPEYVPKCCAPTQNLNLS 92  
RESULT 114  
US-10-115-406-9  
Sequence 9, Application US/10115406  
Publication No. US20020127612A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
FILE REFERENCE: JH01190-3  
CURRENT APPLICATION NUMBER: US/10/115,406  
CURRENT FILING DATE: 2002-04-02  
PRIOR APPLICATION NUMBER: 09/301,520  
PRIOR FILING DATE: 1999-04-28  
PRIOR APPLICATION NUMBER: US 09/117,062  
PRIOR FILING DATE: 1998-10-13

PRIOR APPLICATION NUMBER: US 08/491,835  
PRIOR FILING DATE: 1995-10-23  
PRIOR APPLICATION NUMBER: PCT/US94/00685  
PRIOR FILING DATE: 1994-01-12  
PRIOR APPLICATION NUMBER: US 08/003,303  
PRIOR FILING DATE: 1993-01-12  
NUMBER OF SEQ ID NOS: 28  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 9  
LENGTH: 118  
TYPE: PRT  
ORGANISM: Mus musculus  
US-10-115-406-9  
Query Match 87.4%; Score 97; DB 13; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
Qy 1 INPETHPKCCAPTQNLNLS 20  
Do 73 NMPEYVPKCCAPTQNLNLS 92  
RESULT 115  
US-10-154-333-11  
Sequence 11, Application US/10154333  
Publication No. US20030109684A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/154,333  
FILING DATE: 21-May-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: Vgr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
SEQUENCE DESCRIPTION: SEQ ID NO: 11:  
US-10-154-333-11

Query Match 87.4%; Score 97; DB 14; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 73 MNPEYVPCCAPTKLNAIS 92

RESULT 116  
US-10-704-223-9  
Sequence 9, Application US/10704223  
Publication No. US20040152143A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
APPLICANT: LEE, Se-jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
FILE REFERENCE: JH01190-7  
CURRENT APPLICATION NUMBER: US/10/704,223  
CURRENT FILING DATE: 2003-11-07  
PRIOR APPLICATION NUMBER: US 10/115,406  
PRIOR FILING DATE: 2002-04-02  
PRIOR APPLICATION NUMBER: US 09/301,520  
PRIOR FILING DATE: 1999-04-28  
PRIOR APPLICATION NUMBER: US 09/172,062  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: US 08/491,835  
PRIOR FILING DATE: 1995-10-23  
PRIOR APPLICATION NUMBER: PCT/US94/00685  
PRIOR FILING DATE: 1994-01-12  
PRIOR APPLICATION NUMBER: US 08/003,303  
PRIOR FILING DATE: 1993-01-12  
NUMBER OF SEQ ID NOS: 28  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 9  
LENGTH: 118  
TYPE: PRT  
ORGANISM: Mus musculus  
US-10-704-223-9

Query Match 87.4%; Score 97; DB 16; Length 118;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 73 MNPEYVPCCAPTKLNAIS 92

RESULT 117  
US-09-813-459-12  
Sequence 12, Application US/09813459  
Patent No. US20020107369A1  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-jin  
Cunningham, No. US20020107369A1  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jbas & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/813,459

FILING DATE: 20-Mar-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/624,635  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Wetherell, Jr., Ph.D., John R.,  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD-3054  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: Ygr-1  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 12:  
US-09-813-459-12

Query Match 87.4%; Score 97; DB 9; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 74 MNPEYVPCCAPTKLNAIS 93

RESULT 118  
US-09-859-211-39  
Sequence 39, Application US/09859211  
Patent No. US20020157125A1  
GENERAL INFORMATION:  
APPLICANT: Lee, Se-jin  
McPherson, Alexandra C.  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
FILE REFERENCE: 07265/144001  
CURRENT APPLICATION NUMBER: US/09/859,211  
CURRENT FILING DATE: 2001-05-15  
PRIOR APPLICATION NUMBER: 09/019,070  
PRIOR FILING DATE: 1996-02-05  
PRIOR APPLICATION NUMBER: 08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: 08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: 08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: 08/525,596  
PRIOR FILING DATE: 1995-10-26  
PRIOR APPLICATION NUMBER: PCT/US94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: 08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 51  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 39  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-859-211-39

Query Match 87.4%; Score 97; DB 9; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2,9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
DB 74 MNPEYVPRCCAPTKLNAIS 93

## RESULT 119

US-09-880-708-17

Sequence 17, Application US/09880708  
Patent No. US20020165361A1

GENERAL INFORMATION:

APPLICANT: Lee, Se-Jin

Huyh, Thanh

TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5

NUMBER OF SEQUENCES: 28

CORRESPONDENCE ADDRESS:

ADDRESSEE: Gray Cary Ware &amp; Freidenrich LLP

STREET: 4365 Executive Drive, Suite 1600

CITY: San Diego

STATE: CA

COUNTRY: USA

ZIP: 92121-2189

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: Windows95

SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/880,708

FILING DATE: 12-Jun-2001

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 09/145,060

FILING DATE: &lt;Unknown&gt;

APPLICATION NUMBER: 08/003,144

FILING DATE: 12-JAN-1993

ATTORNEY/AGENT INFORMATION:

NAME: Lisa A. Haille, Ph.D.

REGISTRATION NUMBER: 38,347

REFERENCE/DOCKET NUMBER: 07265/057002

TELECOMMUNICATION INFORMATION:

TELEPHONE: 858/677-1456

TELEFAX: 619/677-1465

INFORMATION FOR SEQ ID NO: 17:

SEQUENCE CHARACTERISTICS:

LENGTH: 119 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

IMMEDIATE SOURCE:

CLONE: Vgr-1

SEQUENCE DESCRIPTION: SEQ ID NO: 17:

US-09-880-708-17

Query Match 87.4%; Score 97; DB 9; Length 119;

Best Local Similarity 85.0%; Pred. No. 2.9e-05;

Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20

DB 74 MNPEYVPRCCAPTKLNAIS 93

## RESULT 120

US-09-872-856-39

Sequence 39, Application US/09872856

Publication No. US20030074680A1

GENERAL INFORMATION:

APPLICANT: Johns Hopkins University School of Medicine

APPLICANT: Lee, Se-Jin

APPLICANT: McPherson, Alexandra

TITLE OF INVENTION: Growth Differentiation Factor-8

FILE REFERENCE: JHU1120-17

CURRENT APPLICATION NUMBER: US/09/872,856

CURRENT FILING DATE: 2001-06-01

PRIOR APPLICATION NUMBER: US 09/124,180  
PRIOR FILING DATE: 1998-07-28  
PRIOR APPLICATION NUMBER: US 09/019,070  
PRIOR FILING DATE: 1998-02-05  
PRIOR APPLICATION NUMBER: US 08/862,445  
PRIOR FILING DATE: 1997-05-23  
PRIOR APPLICATION NUMBER: US 08/847,910  
PRIOR FILING DATE: 1997-04-28  
PRIOR APPLICATION NUMBER: US 08/795,071  
PRIOR FILING DATE: 1997-02-05  
PRIOR APPLICATION NUMBER: US 08/525,596  
PRIOR FILING DATE: 1995-10-25  
PRIOR APPLICATION NUMBER: PCT/US 94/03019  
PRIOR FILING DATE: 1994-03-18  
PRIOR APPLICATION NUMBER: US 08/033,923  
PRIOR FILING DATE: 1993-03-19  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO: 39  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-872-856-39

Query Match 87.4%; Score 97; DB 10; Length 119;  
Best Local Similarity 85.0%; Pred. No. 2.9e-05;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
DB 74 MNPEYVPRCCAPTKLNAIS 93

## RESULT 121

US-10-335-483-21

Sequence 21, Application US/10335483

Publication No. US20030120058A1

GENERAL INFORMATION:

APPLICANT: Huyh, Thanh

Lee, Se-Jin

TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8

NUMBER OF SEQUENCES: 32

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fish &amp; Richardson P.C.

STREET: 4225 Executive Square, Suite 1400

CITY: La Jolla

STATE: CA

COUNTRY: US

ZIP: 92037

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: Windows95

SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/335,483

FILING DATE: 31-Dec-2002

CLASSIFICATION: &lt;Unknown&gt;

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/177,860

FILING DATE: &lt;Unknown&gt;

APPLICATION NUMBER: 08/525,596

FILING DATE: 19-SEP-1995

APPLICATION NUMBER: PCT/US94/07762

FILING DATE: 08-JUL-1994

ATTORNEY/AGENT INFORMATION:

NAME: Wetherell, Jr., Ph.D, John R.

REGISTRATION NUMBER: 31,678

REFERENCE/DOCKET NUMBER: 07265/075001

TELECOMMUNICATION INFORMATION:

TELEPHONE: 619-678-5070

TELEFAX: 619-678-5099

INFORMATION FOR SEQ ID NO: 21:

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?      SEQUENCE CHARACTERISTICS:
?      LENGTH: 119 amino acids
?      TYPE: amino acid
?      TOPOLOGY: linear
?      MOLECULE TYPE: protein
?      IMMEDIATE SOURCE:
?      CLONE: Vgr-1
?      FEATURE:
?      NAME/KEY: Protein
?      LOCATION: 1..119
?      SOURCE DESCRIPTION: SEQ ID NO: 21
US-10-335-483-21

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Query Match	87.4%	Score 97	DB 14	Length 119
Best Local Similarity	85.0%	Pred. No.	2.9e-05	
Matches	17	Conservative	2	Mismatches 1
				Indels 0
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CY	1	INBETVPCCAPITOLNAIS	20	
Db	74	INBETVPCCAPITOLNAIS	93	

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Query Match      87.4%; Score 97; DB 15; Length 119;
Best Local Similarity 85.0%; Pred. No. 2.9e-05;
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0

Oy      1 INPRTVPKPCCAPTOLNAIS 20
      :||| ||||| :|||
Db      74 MNPEIVPKPCCAPTOLNAIS 93

RESULT 123
US-10-693-536-11
; Sequence 11, Application US/10693536
; Publication No. US20040067556A1

```

```

GENERAL INFORMATION:
APPLICANT: Lee, Se-Jin
                Hyunh, Thanh
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSER: fish & Richardson
STREET: 4225 Executive Square, Suite 1400
City: La Jolla
STATE: California
COUNTRY: USA
ZIP: 92037

COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/693,536
FILING DATE: 23-Oct-2003
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/619,061
FILING DATE: 18-Jul-2000
APPLICATION NUMBER: US/09/097,616
FILING DATE: 15-Jun-1998
APPLICATION NUMBER: US 08/581,529
FILING DATE: 15-Apr-1996

ATTORNEY/AGENT INFORMATION:
NAME: Lisa A. Haile, Ph.D.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 07265/082001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 678-5070
TELEFAX: (619) 678-5099

INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: VgT-1

FEATURE:
NAME/KEY: Protein
LOCATION: 1..119
SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-10-693-536-11

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Query Match      87.4% ; Score 97 ; DB 15; Length 119;  
Best Local Similarity    85.0% ; Pred. No. 2,9e-05;  
Matches 17; Conservative   2; Mismatches   1; Indels   0; Gaps   0;  
  
QY              1 INPETHKPCCAPTOLNAIS 20  
                :|||||::|||  
Db              74 MNPEYVKPCCAPTKLNAIS 93  
  
RESULT 124  
US-10-758-210-11  
Sequence 11, Application US/10758210  
Publication No. US20040127696A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-gin  
APPLICANT: HUYNH, Thanh  
TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7  
FILE REFERENCE: JHU1130-2  
CURRENT APPLICATION NUMBER: US/10/758,210  
CURRENT FILING DATE: 2004-01-14  
PRIOR APPLICATION NUMBER: US/09/412,791D  
PRIOR FILING DATE: 1999-10-05
```





RESULT 129  
US-09-784-911-10  
Sequence 10, Application US/09784911  
Patent No. US20020072115A1  
GENERAL INFORMATION:  
APPLICANT: Harrison, Leonard C.  
APPLICANT: Jiang, Fang-Xu  
APPLICANT: Stanley, Edward Guy  
APPLICANT: Gomez, Leonel Jorge  
TITLE OF INVENTION: Pancreatic islet cell growth factors  
FILE REFERENCE: Davies Collision Cave  
CURRENT APPLICATION NUMBER: US/09/784,911  
CURRENT FILING DATE: 2001-09-17  
NUMBER OF SEQ ID NOS: 30  
SOFTWARE: PatentIn version 2.1  
SEQ ID NO 10  
LENGTH: 451  
TYPE: PRT  
ORGANISM: mouse  
US-09-784-911-10

Query Match 87.4%; Score 97; DB 9; Length 451;  
Best Local Similarity 85.0%; Pred. No. 0.00011;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
Db 390 MNPEYVXPCCAPTKLNAIS 409  
:|||||:|||||

RESULT 130  
US-10-122-026-19  
Sequence 19, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMANN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-Aug-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992

APPLICATION NUMBER: US 07/938,336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STR-060CN  
INFORMATION FOR SEQ ID NO: 19:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 513 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..513  
OTHER INFORMATION: /note="PRE-PRO-BMP6 (HUMAN)"  
PUBLICATION INFORMATION:  
AUTHORS: CELESTE  
JOURNAL: Proc. Natl. Acad. Sci. U.S.A.  
VOLUME: 87  
PAGES: 9843-9847  
DATE: 1991  
US-10-122-026-19  
SEQUENCE DESCRIPTION: SEQ ID NO: 19:  
Query Match 87.4%; Score 97; DB 14; Length 513;  
Best Local Similarity 85.0%; Pred. No. 0.00012;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
Db 468 MNPEYVXPCCAPTKLNAIS 487  
:|||||:|||||

RESULT 131  
US-10-164-279-33  
Sequence 33, Application US/10164279  
Publication No. US20030185792A1  
GENERAL INFORMATION:  
APPLICANT: Keck, P.  
TITLE OF INVENTION: MORPHOGEN ANALOGS OF BOND MORPHOGENIC PROTEINS  
FILE REFERENCE: CIBT-P04-566  
CURRENT APPLICATION NUMBER: US/10/164,279  
CURRENT FILING DATE: 2002-06-06  
PRIOR APPLICATION NUMBER: 09/791346  
PRIOR FILING DATE: 2001-02-22  
NUMBER OF SEQ ID NOS: 64  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 33  
LENGTH: 513  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-164-279-33

Query Match 87.4%; Score 97; DB 14; Length 513;  
Best Local Similarity 85.0%; Pred. No. 0.00012;  
Matches 17; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 1 INPETYKPCCAPTKLNAIS 20  
Db 468 MNPEYVXPCCAPTKLNAIS 487  
:|||||:|||||

RESULT 132



Tue Oct 26 09:17:06 2004

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PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US/08/126,100
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/922,813
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/667,274
FILING DATE: 11-MAR-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/752,764
FILING DATE: 30-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: FITCHER ESQ, EDWARD R
REGISTRATION NUMBER: 27,829
REFERENCE/DOCKET NUMBER: CRP-070
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7000
TELEFAX: 617/248-7100
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 102 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE: MORIDAE
ORGANISM: MORIDAE
FEATURE:
NAME/KEY: Protein
LOCATION: 1..102
OTHER INFORMATION: /label= VGR-1-FX
US-08-260-675-13

Query Match      84.7%; Score 94; DB 8; Length 102;
Best Local Similarity 80.0%; Pred. No. 6.3e-05;
Matches 16; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Cy 1 INPETYPRCCAPTOLNAIS 20
Db 57 MNPEYVPRCCAPTQKVAIS 76

RESULT 136
US-10-050-050-13
Sequence 13, Application US/10050050
Publication No. US2003012230A1
GENERAL INFORMATION:
APPLICANT: COHEN, CHARLES M.
CHARLETTE, MARC F.
KUBERASAMPATH, THANGAVEL
RUEGER, DAVID C.
OPPERMANN, HERMANN
PANG, ROY H.L.
OZKATNAK, ENGIN
SMART, JOHN E.
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING
PROLIFERATION OF EPITHELIAL CELLS.
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSER: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
STREET: 45 SOUTH STREET
CITY: HOPKINTON
STATE: MA
COUNTRY: USA
ZIP: 01748
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/050,050
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FILING DATE: 15-Jan-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/461,113
FILING DATE: <Unknown>
APPLICATION NUMBER: US 08/445,882
FILING DATE: 22-MAY-1995
ATTORNEY/AGENT INFORMATION:
NAME: PENTON ESQ, GILLIAN M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: CRP-074DV
TELECOMMUNICATION INFORMATION:
TELEPHONE: (508) 435-9001
TELEFAX: (508) 435-6951
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 102 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 1..102
OTHER INFORMATION: /note= "VGR-1(FX)"
US-10-050-050-13

Query Match      84.7%; Score 94; DB 14; Length 102;
Best Local Similarity 80.0%; Pred. No. 6.3e-05;
Matches 16; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Cy 1 INPETYPRCCAPTOLNAIS 20
Db 57 MNPEYVPRCCAPTQKVAIS 76

RESULT 137
US-10-385-064-13
Sequence 13, Application US/10385064
Publication No. US20040102373A1
GENERAL INFORMATION:
APPLICANT: Cohen, Charles M.
APPLICANT: Kuberassampath, Thangavel
APPLICANT: Oppermann, Hermann
APPLICANT: Rueger, David C.
TITLE OF INVENTION: Protein Induced Morphogenesis
FILE REFERENCE: CBM-2 DIV (00960-502 DIV)
CURRENT APPLICATION NUMBER: US/10/385,064
CURRENT FILING DATE: 2003-03-10
PRIOR APPLICATION NUMBER: US/09/464,206
PRIOR FILING DATE: 1999-12-15
PRIOR APPLICATION NUMBER: 08/396,684
PRIOR FILING DATE: 1995-03-01
NUMBER OF SEQ ID NOS: 16
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 13
LENGTH: 102
TYPE: PRT
ORGANISM: Murinae gen. sp.
FEATURE:
OTHER INFORMATION: VGR-1-FX
US-10-385-064-13

Query Match      84.7%; Score 94; DB 16; Length 102;
Best Local Similarity 80.0%; Pred. No. 6.3e-05;
Matches 16; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Cy 1 INPETYPRCCAPTOLNAIS 20
Db 57 MNPEYVPRCCAPTQKVAIS 76
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RESULT 138  
US-10-187-394-30  
; Sequence 30, Application US/10187394  
; Publication No. US20030176667A1  
; GENERAL INFORMATION:  
; APPLICANT: KECK, PETER  
; APPLICANT: SMART, JOHN  
; TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
; TITLE OF INVENTION: SUPERFAMILY (MORPHONS)  
; NUMBER OF SEQUENCES: 45  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
; ADDRESSEE: THIBEAULT, LLP  
; STREET: 125 HIGH STREET  
; CITY: BOSTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02110  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/187,394  
; FILING DATE: 28-JUNE-2002  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/09/496,398  
; FILING DATE: 02-FEB-2000  
; CLASSIFICATION:  
; APPLICATION NUMBER: US 08/478,097  
; FILING DATE: 07-JUN-1995  
; ATTORNEY/AGENT INFORMATION:  
; NAME: PITCHER ESO, EDMUND R  
; REGISTRATION NUMBER: 27,829  
; REFERENCE/DOCKET NUMBER: STK-059CN  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617-248-7000  
; TELEFAX: 617-248-7100  
; INFORMATION FOR SEQ ID NO: 30:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 115 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..115  
; OTHER INFORMATION: /note= "OP-1 MORPHON PROTEIN"  
US-10-187-394-30

Query Match 81.5%; Score 90.5; DB 14; Length 115;  
Best Local Similarity 82.6%; Pred. No. 0.0002; 1; Indels 3; Gaps 1;  
Matches 19; Conservative 0; Mismatches 1;

QY 1 INPETHKPC--CAPTOLNAIS 20  
|:|||||:|||||  
DB 67 INPETHKPCASGCGCAPTOLNAIS 89

RESULT 139  
US-08-260-675-27  
; Sequence 27, Application US/08260675  
; Publication No. US20030104993A1  
; GENERAL INFORMATION:  
; APPLICANT: RUEGER, DAVID C  
; APPLICANT: KUBERASAMPATH, THANGAVEL  
; APPLICANT: OPPERMAN, HERMANN  
; APPLICANT: OZKAYNAK, ENGIN  
; APPLICANT: PANG, ROY HL

APPLICANT: COHEN, CHARLES M  
; TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
; TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
; NUMBER OF SEQUENCES: 33  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: TESTA HURWITZ & THIBEAULT  
; STREET: 55 STATE STREET  
; CITY: BOSTON  
; STATE: MA  
; COUNTRY: USA  
; ZIP: 02140  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/260,675  
; FILING DATE:  
; CLASSIFICATION: 435  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/08/126,100  
; FILING DATE:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/07/922,813  
; FILING DATE:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/667,274  
; FILING DATE: 11-MAR-1991  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 07/752,764  
; FILING DATE: 30-AUG-1991  
; ATTORNEY/AGENT INFORMATION:  
; NAME: PITCHER ESO, EDMUND R  
; REGISTRATION NUMBER: 27,829  
; REFERENCE/DOCKET NUMBER: CRP-070  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 617/248-7000  
; TELEFAX: 617/248-7100  
; INFORMATION FOR SEQ ID NO: 27:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 102 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; ORIGINAL SOURCE:  
; ORGANISM: HOMO SAPIENS  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..102  
; OTHER INFORMATION: /note= "BMP5"  
US-08-260-675-27

Query Match 78.4%; Score 87; DB 8; Length 102;  
Best Local Similarity 83.3%; Pred. No. 0.00052; 1; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1;

QY 3 PETHVPCPCAPTOLNAIS 20  
|:|||||:|||||  
DB 59 PDHVPKPCAPTOLNAIS 76

RESULT 140  
US-09-952-318A-27  
; Sequence 27, Application US/09952318A  
; Publication No. US20030224979A1  
; GENERAL INFORMATION:  
; APPLICANT: Kuberampath et al.  
; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
; TITLE OF INVENTION: METABOLIC BONE DISEASE  
; FILE REFERENCE: 00J-P06-522  
; CURRENT APPLICATION NUMBER: US/09/952,318A

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CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO: 27  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-952-318A-27

Query Match 78.4%; Score 87; DB 10; Length 102;  
Best Local Similarity 83.3%; Pred. No. 0.00052;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTOLNAIS 20  
DB 59 PDHVPKPCCAPTKLNAIS 76

RESULT 141  
US-10-050-050-27  
Sequence 27, Application US/10050050  
Publication No. US2003012530A1  
GENERAL INFORMATION:  
APPLICANT: COHEN, CHARLES M.  
CHARLETTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.  
TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-JUN-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001

TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 27:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /label= Bmps  
SEQUENCE DESCRIPTION: SEQ ID NO: 27:  
US-10-050-050-27

Query Match 78.4%; Score 87; DB 14; Length 102;  
Best Local Similarity 83.3%; Pred. No. 0.00052;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTOLNAIS 20  
DB 59 PDHVPKPCCAPTKLNAIS 76

RESULT 142  
US-10-187-394-13  
Sequence 13, Application US/10187394  
Publication No. US20030176667A1  
GENERAL INFORMATION:  
APPLICANT: KACK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
TITLE OF INVENTION: SUPERFAMILY (MORPHONS)  
NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, TESTA, HURWITZ &  
ADDRESSER: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187,394  
FILING DATE: 28-JUNE-2002  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398  
FILING DATE: 02-FEB-2000  
CLASSIFICATION:  
APPLICATION NUMBER: US 08/478,097  
FILING DATE: 07-JUN-1995  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER Esq., EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: STK-059CN  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617-248-7000  
TELEFAX: 617-248-7100  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 102 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:

NAME/KEY: Protein  
LOCATION: 1..102  
OTHER INFORMATION: /note= "BMP-5 SEQUENCE"  
US-10-187-394-13

Query Match  
Best Local Similarity 78.4%; Score 87; DB 14; Length 102;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKPCCAPTOLNAIS 20  
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DB 59 PDHVPKPCCAPTOLNAIS 76

RESULT 143  
US-09-389-705-13  
Sequence 13, Application US/09389705  
Publication No. US20010018509A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: BMP-5  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-09-389-705-13

Query Match  
Best Local Similarity 78.4%; Score 87; DB 9; Length 118;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKPCCAPTOLNAIS 20  
|:|||||:|||||  
DB 75 PDHVPKPCCAPTOLNAIS 92

RESULT 144

US-10-115-406-11  
Sequence 11, Application US/10115406  
Publication No. US20020127612A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-Jin  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
FILE REFERENCE: JH01190-3  
CURRENT APPLICATION NUMBER: US/10/115,406  
CURRENT FILING DATE: 2002-04-02  
PRIOR APPLICATION NUMBER: 09/301,520  
PRIOR FILING DATE: 1999-04-28  
PRIOR APPLICATION NUMBER: US 09/172,062  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: US 08/491,835  
PRIOR FILING DATE: 1995-10-23  
PRIOR APPLICATION NUMBER: PCT/US94/00685  
PRIOR FILING DATE: 1994-01-12  
PRIOR APPLICATION NUMBER: US 08/003,303  
PRIOR FILING DATE: 1993-01-12  
NUMBER OF SEQ ID NOS: 28  
SOFTWARE: Patent version 3.0  
SEQ ID NO 11  
LENGTH: 118  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-115-406-11

Query Match  
Best Local Similarity 78.4%; Score 87; DB 13; Length 118;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKPCCAPTOLNAIS 20  
|:|||||:|||||  
DB 75 PDHVPKPCCAPTOLNAIS 92

RESULT 145  
US-10-154-333-13  
Sequence 13, Application US/10154333  
Publication No. US20030109684A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/154,333  
FILING DATE: 21-May-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/389,705  
FILING DATE: 03-Sep-1999  
APPLICATION NUMBER: 09/153,733  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: WETHERELL, JR. Ph.D., JOHN R.  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: FD2279 PCT  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110

INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 118 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: BWP-5  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..118  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-154-333-13

Query Match 78.4%; Score 87; DB 14; Length 118;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNLNLS 20  
|:|||||:|||||  
75 PDHVPKPCCAPTKNLNLS 92

RESULT 146  
US-10-704-223-11  
; Sequence 11, Application US/10704223  
; Publication No. US20040152143A1  
; GENERAL INFORMATION:  
; APPLICANT: THE JOHNS HOPKINS UNIVERSITY  
; APPLICANT: LEE, Se-jin  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9  
; FILE REFERENCE: JHU1190-7  
; CURRENT APPLICATION NUMBER: US/10/704,223  
; CURRENT FILING DATE: 2003-11-07  
; PRIOR APPLICATION NUMBER: US 10/115,406  
; PRIOR FILING DATE: 2002-04-02  
; PRIOR APPLICATION NUMBER: US 09/301,520  
; PRIOR FILING DATE: 1999-04-28  
; PRIOR APPLICATION NUMBER: US 09/172,062  
; PRIOR FILING DATE: 1998-10-13  
; PRIOR APPLICATION NUMBER: US 08/491,835  
; PRIOR FILING DATE: 1995-10-23  
; PRIOR APPLICATION NUMBER: PCT/US94/00665  
; PRIOR FILING DATE: 1994-01-12  
; PRIOR APPLICATION NUMBER: US 08/003,303  
; PRIOR FILING DATE: 1993-01-12  
; NUMBER OF SEQ ID NOS: 28  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 11  
; LENGTH: 118  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; US-10-704-223-11

Query Match 78.4%; Score 87; DB 16; Length 118;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNLNLS 20  
|:|||||:|||||  
75 PDHVPKPCCAPTKNLNLS 92

RESULT 147  
US-09-813-459-14  
; Sequence 14, Application US/09813459  
; Patent No. US20020107369A1  
; GENERAL INFORMATION:  
; APPLICANT: Lee, Se-jin  
; Cunningham, No. US20020107369A1  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-10  
; NUMBER OF SEQUENCES: 26

CORRESPONDENCE ADDRESS:  
ADDRESSEE: Spensley Horn Jubae & Lubitz  
STREET: 1880 Century Park East, Suite 500  
CITY: Los Angeles  
STATE: California  
COUNTRY: USA  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/813,459  
FILING DATE: 20-Mar-2001  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/624,635  
FILING DATE: <unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: Netherell, Jr., Ph.D., John R.,  
REGISTRATION NUMBER: 31,678  
REFERENCE/DOCKET NUMBER: PD-3054  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619) 455-5100  
TELEFAX: (619) 455-5110  
INFORMATION FOR SEQ ID NO: 14:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 119 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
IMMEDIATE SOURCE:  
CLONE: BWP-5  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..119  
SEQUENCE DESCRIPTION: SEQ ID NO: 14:  
US-09-813-459-14

Query Match 78.4%; Score 87; DB 9; Length 119;  
Best Local Similarity 83.3%; Pred. No. 0.0006;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRCCAPTQNLNLS 20  
|:|||||:|||||  
76 PDHVPKPCCAPTKNLNLS 93

RESULT 148  
US-09-859-211-41  
; Sequence 41, Application US/09859211  
; Patent No. US20020157125A1  
; GENERAL INFORMATION:  
; APPLICANT: Lee, Se-jin  
; APPLICANT: McPherson, Alexandra C.  
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8  
; FILE REFERENCE: 07265/144001  
; CURRENT APPLICATION NUMBER: US/09/859,211  
; CURRENT FILING DATE: 2001-05-15  
; PRIOR APPLICATION NUMBER: 09/019,070  
; PRIOR FILING DATE: 1998-02-05  
; PRIOR APPLICATION NUMBER: 08/862,445  
; PRIOR FILING DATE: 1997-05-23  
; PRIOR APPLICATION NUMBER: 08/847,910  
; PRIOR FILING DATE: 1997-04-28  
; PRIOR APPLICATION NUMBER: 08/795,071  
; PRIOR FILING DATE: 1997-02-05  
; PRIOR APPLICATION NUMBER: 08/525,596  
; PRIOR FILING DATE: 1995-10-26  
; PRIOR APPLICATION NUMBER: PCT/US94/03019  
; PRIOR FILING DATE: 1994-03-18

```

; PRIOR APPLICATION NUMBER: 08/033,923
; PRIOR FILING DATE: 1993-03-19
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 41
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-859-211-41

Query Match      78.4%; Score 87; DB 9; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRCCAPTQNLNLS 20
       1:|||||:|||||
       76 PDHVPKPCAPTQNLNLS 93

RESULT 149
US-09-880-708-19
; Sequence 19, Application US/09880708
; Patent No. US20020165361A1
; GENERAL INFORMATION:
; APPLICANT: Lee, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-5
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Gray Cary Ware & Freidenrich LLP
; STREET: 4365 Executive Drive, Suite 1600
; CITY: San Diego
; STATE: CA
; COUNTRY: USA
; ZIP: 92121-2189
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows95
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/880,708
; FILING DATE: 12-Jun-2001
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/145,060
; FILING DATE: <Unknown>
; APPLICATION NUMBER: 08/003,144
; FILING DATE: 12-JAN-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Lisa A. Haile, Ph.D.
; REGISTRATION NUMBER: 38,347
; REFERENCE/DOCKET NUMBER: 07265/057002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 858/677-1456
; TELEFAX: 619/677-1456
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 119 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; IMMEDIATE SOURCE:
; CLONE: BMP-5
; SEQUENCE DESCRIPTION: SEQ ID NO: 19:
US-09-880-708-19

Query Match      78.4%; Score 87; DB 9; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRCCAPTQNLNLS 20
       1:|||||:|||||
       76 PDHVPKPCAPTQNLNLS 93

DB
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RESULT 150
US-09-872-856-41
; Sequence 41, Application US/03872856
; Publication No. US20030074680A1
; GENERAL INFORMATION:
; APPLICANT: Johns Hopkins University School of Medicine
; APPLICANT: Lee, Se-Jin
; APPLICANT: McPherson, Alexandra
; TITLE OF INVENTION: Growth Differentiation Factor-8
; FILE REFERENCE: JHU1120-17
; CURRENT APPLICATION NUMBER: US/09/872,856
; FILING DATE: 2001-06-01
; PRIOR APPLICATION NUMBER: US 09/124,180
; PRIOR FILING DATE: 1998-07-28
; PRIOR APPLICATION NUMBER: US 09/019,070
; PRIOR FILING DATE: 1998-02-05
; PRIOR APPLICATION NUMBER: US 08/862,445
; PRIOR FILING DATE: 1997-05-23
; PRIOR APPLICATION NUMBER: US 08/847,910
; PRIOR FILING DATE: 1997-04-28
; PRIOR APPLICATION NUMBER: US 08/795,071
; PRIOR FILING DATE: 1997-02-05
; PRIOR APPLICATION NUMBER: US 08/525,596
; PRIOR FILING DATE: 1995-10-25
; PRIOR APPLICATION NUMBER: PCT/US 94/03019
; PRIOR FILING DATE: 1994-03-18
; PRIOR APPLICATION NUMBER: US 08/033,923
; PRIOR FILING DATE: 1993-03-19
; NUMBER OF SEQ ID NOS: 53
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 41
; LENGTH: 119
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-872-856-41

Query Match      78.4%; Score 87; DB 10; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRCCAPTQNLNLS 20
       1:|||||:|||||
       76 PDHVPKPCAPTQNLNLS 93

DB

RESULT 151
US-10-335-483-23
; Sequence 23, Application US/10335483
; Publication No. US20030120058A1
; GENERAL INFORMATION:
; APPLICANT: Huynh, Thanh
; APPLICANT: Lee, Se-Jin
; TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-8
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: US
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows95
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/335,483
; FILING DATE: 31-Dec-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US/09/177,860
FILING DATE: <Unknown>
APPLICATION NUMBER: 08/525,596
FILING DATE: 19-SEP-1995
APPLICATION NUMBER: PCT/US94/07762
FILING DATE: 08-JUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: Wechereff, Jr., Ph.D, John R.
REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: 07265/075001
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-678-5070
TELEFAX: 619-678-5099
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: BMP-5
FEATURE:
NAME/KEY: Protein
LOCATION: 1..119
SEQUENCE DESCRIPTION: SEQ ID NO: 23:
US-10-335-483-23

Query Match      78.4%; Score 87; DB 14; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRKPCAPTQLNIAIS 20
      |:|||||:|||||
Db      76 PDHVPKPCAPTQLNIAIS 93

RESULT 152
US-10-463-973-41
Sequence 41, Application US/10463973
Publication No. US20040055027A1
GENERAL INFORMATION:
APPLICANT: Johns Hopkins University School of Medicine
APPLICANT: Lee, Se-jin
APPLICANT: McPherson, Alexandra
TITLE OF INVENTION: Growth Differentiation Factor-8
FILE REFERENCE: JHU1120-17
CURRENT APPLICATION NUMBER: US/10/463,973
PRIOR APPLICATION NUMBER: US/09/072,856
PRIOR FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: US/09/124,180
PRIOR FILING DATE: 1998-07-28
PRIOR APPLICATION NUMBER: US 09/019,070
PRIOR FILING DATE: 1998-02-05
PRIOR APPLICATION NUMBER: US 08/862,445
PRIOR FILING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: US 08/847,910
PRIOR FILING DATE: 1997-04-28
PRIOR APPLICATION NUMBER: US 08/795,071
PRIOR FILING DATE: 1997-02-05
PRIOR APPLICATION NUMBER: US 08/525,596
PRIOR FILING DATE: 1995-10-25
PRIOR APPLICATION NUMBER: PCT/US 94/03019
PRIOR FILING DATE: 1994-03-18
PRIOR APPLICATION NUMBER: US 08/033,923
PRIOR FILING DATE: 1993-03-19
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PatentIn version 3.1
SEQ ID NO 41
LENGTH: 119
TYPE: PRT
ORGANISM: Homo sapiens
US-10-463-973-41
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```
Query Match      78.4%; Score 87; DB 15; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRKPCAPTQLNIAIS 20
      |:|||||:|||||
Db      76 PDHVPKPCAPTQLNIAIS 93

RESULT 153
US-10-693-536-13
Sequence 13, Application US/10693536
Publication No. US20040067556A1
GENERAL INFORMATION:
APPLICANT: Lee, Se-jin
APPLICANT: Hyunh, Thanh
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-6
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: California
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/693,536
FILING DATE: 23-Oct-2003
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/619,061
FILING DATE: 18-Jul-2000
APPLICATION NUMBER: US/09/097,616
FILING DATE: 15-JUN-1998
APPLICATION NUMBER: US 08/581,529
FILING DATE: 15-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Lisa A. Haile, Ph.D.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 07265/082001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 678-5070
TELEFAX: (619) 678-5099
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
IMMEDIATE SOURCE:
CLONE: BMP-5
FEATURE:
NAME/KEY: Protein
LOCATION: 1..119
SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-10-693-536-13

Query Match      78.4%; Score 87; DB 15; Length 119;
Best Local Similarity 83.3%; Pred. No. 0.0006;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRKPCAPTQLNIAIS 20
      |:|||||:|||||
Db      76 PDHVPKPCAPTQLNIAIS 93
```

RESULT 154  
US-10-758-210-13  
Sequence 13, Application US/10758210  
Publication No. US20040127696A1  
GENERAL INFORMATION:  
APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
APPLICANT: LEE, Se-jin  
APPLICANT: HUTH, Thanh  
TITLE OF INVENTION: ANTIBODIES BINDING TO GROWTH DIFFERENTIATION FACTOR-7  
FILE REFERENCE: JHU130-2  
CURRENT APPLICATION NUMBER: US/10/758, 210  
CURRENT FILING DATE: 2004-01-14  
PRIOR APPLICATION NUMBER: US/09/412, 791D  
PRIOR FILING DATE: 1999-10-05  
PRIOR APPLICATION NUMBER: US 08/561, 528  
PRIOR FILING DATE: 1996-01-09  
PRIOR APPLICATION NUMBER: PCT/US94/07799  
PRIOR FILING DATE: 1994-07-08  
NUMBER OF SEQ ID NOS: 21  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 13  
LENGTH: 119  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-758-210-13

Query Match 78.4%; Score 87; DB 16; Length 119;  
Best Local Similarity 83.3%; Pred. No. 0.0006; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1;

QY 3 PETVPRKPCAPTLNMAIS 20  
Db 76 PDHVPKPCAPTLNMAIS 93

RESULT 155  
US-10-366-345-61  
Sequence 61, Application US/10366345  
Publication No. US20030224501A1  
GENERAL INFORMATION:  
APPLICANT: Young, et al.  
TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and  
FILE REFERENCE: P1189  
CURRENT APPLICATION NUMBER: US/10/366, 345  
CURRENT FILING DATE: 2003-02-14  
NUMBER OF SEQ ID NOS: 77  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 61  
LENGTH: 138  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-366-345-61

Query Match 78.4%; Score 87; DB 14; Length 138;  
Best Local Similarity 83.3%; Pred. No. 0.00069; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1;

QY 3 PETVPRKPCAPTLNMAIS 20  
Db 95 PDHVPKPCAPTLNMAIS 112

RESULT 156  
US-10-122-026-18  
Sequence 18, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:  
APPLICANT: JONES, WILLIAM K  
APPLICANT: TUCKER, RONALD F  
APPLICANT: RUEGER, DAVID C  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGİN

KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER  
NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122, 026  
FILING DATE: 29-Aug-2002  
CLASSIFICATION: <unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402, 542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840, 510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029, 335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971, 091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946, 235  
FILING DATE: 16-SEP-1992  
APPLICATION NUMBER: US 07/938, 336  
FILING DATE: 28-AUG-1992  
APPLICATION NUMBER: US 07/923, 780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752, 857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752, 764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667, 274  
FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STX-0600N  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 453 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..453  
OTHER INFORMATION: /note= "PRE-PRO-BMP5 (HUMAN)"  
PUBLICATION INFORMATION:  
AUTHORS: CELESTE,  
JOURNAL: Proc. Natl. Acad. Sci. U.S.A.  
VOLUME: 87  
PAGES: 9843-9847  
DATE: 1991  
SEQUENCE DESCRIPTION: SEQ ID NO: 18:  
US-10-122-026-18

Query Match 78.4%; Score 87; DB 14; Length 453;  
Best Local Similarity 83.3%; Pred. No. 0.0022; Indels 0; Gaps 0;  
Matches 15; Conservative 2; Mismatches 1;

QY 3 PETVPRKPCAPTLNMAIS 20  
Db 410 PDHVPKPCAPTLNMAIS 427

```
RESULT 157
US-10-286-152A-6
; Sequence 6, Application US/10286152A
; Publication No. US20030134308A1
; GENERAL INFORMATION:
; APPLICANT: Alcon Research, Ltd.
; TITLE OF INVENTION: Bone Morphogenic Proteins (BMP), BMP Receptors and BMP Binding Pr
; FILE REFERENCE: 2312 US
; CURRENT APPLICATION NUMBER: US/10/286,152A
; CURRENT FILING DATE: 2002-02-28
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 454
; TYPE: PRT
; ORGANISM: homo sapiens
US-10-286-152A-6

Query Match      78.4%; Score 87; DB 14; Length 454;
Best Local Similarity 83.3%; Pred. No. 0.0022;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRKPCCAPTQLNMAIS 20
Db      411 PDHVPKPCCAPTKLNMAIS 428

RESULT 158
US-10-164-279-29
; Sequence 29, Application US/10164279
; Publication No. US20030185792A1
; GENERAL INFORMATION:
; APPLICANT: Keck, P.
; TITLE OF INVENTION: MORPHOGEN ANALOGS OF BOND MORPHOGENIC PROTEINS
; FILE REFERENCE: CIBT-P04-566
; CURRENT APPLICATION NUMBER: US/10/164,279
; CURRENT FILING DATE: 2002-06-06
; PRIOR APPLICATION NUMBER: 09/791946
; PRIOR FILING DATE: 2001-02-22
; NUMBER OF SEQ ID NOS: 64
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 29
; LENGTH: 454
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-164-279-29

Query Match      78.4%; Score 87; DB 14; Length 454;
Best Local Similarity 83.3%; Pred. No. 0.0022;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRKPCCAPTQLNMAIS 20
Db      411 PDHVPKPCCAPTKLNMAIS 428

RESULT 159
US-10-366-345-37
; Sequence 37, Application US/10366345
; Publication No. US20030224501A1
; GENERAL INFORMATION:
; APPLICANT: Young, et al.
; TITLE OF INVENTION: Bone Morphogenetic Protein Polynucleotides, Polypeptides and
; FILE REFERENCE: PT189
; CURRENT APPLICATION NUMBER: US/10/366,345
; CURRENT FILING DATE: 2003-02-14
; NUMBER OF SEQ ID NOS: 77
; SOFTWARE: Patentin version 3.2
```

```
; SEQ ID NO 37
; LENGTH: 454
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-366-345-37

Query Match      78.4%; Score 87; DB 14; Length 454;
Best Local Similarity 83.3%; Pred. No. 0.0022;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRKPCCAPTQLNMAIS 20
Db      411 PDHVPKPCCAPTKLNMAIS 428

RESULT 160
US-10-375-150-10
; Sequence 10, Application US/10375150
; Publication No. US20030235868A1
; GENERAL INFORMATION:
; APPLICANT: Israel, David
; TITLE OF INVENTION: Recombinant Bone Morphogenetic Protein
; FILE REFERENCE: Heterodimers, Compositions and Methods of Use.
; NUMBER OF SEQUENCES: 30
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Legal Affairs, Genetics Institute, Inc.
; STREET: 87 Cambridgepark Drive
; CITY: Cambridge
; STATE: MA
; COUNTRY: USA
; ZIP: 02140-2387
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Tape
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/375,150
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/989,847
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Kapinos, Ellen J.
; REGISTRATION NUMBER: 32,245
; REFERENCE/DOCKET NUMBER: GI-5192B
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-876-1170
; TELEFAX: 617-876-5851
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 454 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-10-375-150-10

Query Match      78.4%; Score 87; DB 14; Length 454;
Best Local Similarity 83.3%; Pred. No. 0.0022;
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY      3 PETVPRKPCCAPTQLNMAIS 20
Db      411 PDHVPKPCCAPTKLNMAIS 428

RESULT 161
US-09-813-398-28
; Sequence 28, Application US/09813398
; Patent No. US20020169292A1
; GENERAL INFORMATION:
```

APPLICANT: Bruce D. Weintrub  
APPLICANT: Mariusz W. Szklinski  
APPLICANT: University of Maryland  
TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS  
FILE REFERENCE: US0003031  
CURRENT APPLICATION NUMBER: US/09/813,398  
PRIOR FILING DATE: 2001-03-20  
PRIOR APPLICATION NUMBER: PCT/US99/05908  
PRIOR FILING DATE: 1999-03-19  
PRIOR APPLICATION NUMBER: PCT/US98/19772  
PRIOR FILING DATE: 1998-09-22  
NUMBER OF SEQ ID NOS: 41  
SOFTWARE: PasteSeq for Windows Version 4.0  
SEQ ID NO 28  
LENGTH: 455  
TYPE: PRT  
ORGANISM: HOMO SAPIEN  
US-09-813-398-28

Query Match 78.4%; Score 87; DB 9; Length 455;  
Best Local Similarity 83.3%; Pred. No. 0.0027;  
Matches 15; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

QY 3 PETVPRKCCAPTQNAIS 20  
DB 412 PDHVPKCCAPTQNAIS 429

RESULT 162  
US-09-754-831A-15  
Sequence 15, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Rueger, David, Thangavel  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STR-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 15  
LENGTH: 97  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP4 protein with osteogenic activity  
US-09-754-831A-15

Query Match 74.8%; Score 83; DB 10; Length 97;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETVPRKCCAPTQNAIS 20  
DB 52 MNPGRVPRKCCAPTQNAIS 71

RESULT 163

US-09-754-831A-16  
Sequence 16, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Rueger, David, Thangavel  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STR-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 16  
LENGTH: 97  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP16 protein with osteogenic activity  
US-09-754-831A-16

Query Match 74.8%; Score 83; DB 10; Length 97;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETVPRKCCAPTQNAIS 20  
DB 52 MNPGRVPRKCCAPTQNAIS 71

RESULT 164  
US-09-754-831A-13  
Sequence 13, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Rueger, David, Thangavel  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STR-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 13  
LENGTH: 98  
TYPE: PRT

ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP1 protein with osteogenic activity  
US-09-754-831A-13

Query Match 74.8%; Score 83; DB 10; Length 98;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNIS 20  
DB 53 MNPGRVPRCCVPTLSAIS 72

RESULT 165  
US-09-754-831A-14  
Sequence 14, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Kuberampath, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STK-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20  
PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 14  
LENGTH: 98  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Biosynthetic COP3 protein with osteogenic activity  
US-09-754-831A-14

Query Match 74.8%; Score 83; DB 10; Length 98;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNIS 20  
DB 53 MNPGRVPRCCVPTLSAIS 72

RESULT 166  
US-09-754-831A-44  
Sequence 44, Application US/09754831A  
Publication No. US20030228345A1  
GENERAL INFORMATION:  
APPLICANT: Oppermann, Herman  
APPLICANT: Kuberampath, Thangavel  
APPLICANT: Rueger, David  
APPLICANT: Ozkaynak, Engin  
TITLE OF INVENTION: Osteogenic Devices  
FILE REFERENCE: STK-008CN  
CURRENT APPLICATION NUMBER: US/09/754,831A  
CURRENT FILING DATE: 2001-01-03  
PRIOR APPLICATION NUMBER: US 08/375,901  
PRIOR FILING DATE: 1995-01-20

PRIOR APPLICATION NUMBER: US 08/145,812  
PRIOR FILING DATE: 1993-11-01  
PRIOR APPLICATION NUMBER: US 07/995,345  
PRIOR FILING DATE: 1992-12-22  
PRIOR APPLICATION NUMBER: US 07/315,342  
PRIOR FILING DATE: 1989-02-23  
PRIOR APPLICATION NUMBER: US 07/232,630  
PRIOR FILING DATE: 1988-08-15  
PRIOR APPLICATION NUMBER: US 07/179,406  
PRIOR FILING DATE: 1988-04-08  
NUMBER OF SEQ ID NOS: 72  
SOFTWARE: PatentIn version 3.0  
SEQ ID NO 44  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: COPO  
US-09-754-831A-44

Query Match 74.8%; Score 83; DB 10; Length 102;  
Best Local Similarity 70.0%; Pred. No. 0.0017;  
Matches 14; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLNIS 20  
DB 57 MNPGRVPRCCVPTLSAIS 76

RESULT 167  
US-10-619-910-8  
Sequence 8, Application US/10619910  
Publication No. US20040053844A1  
GENERAL INFORMATION:  
APPLICANT: Kyocera Corporation  
APPLICANT: Nishimura, Yoshiniko  
APPLICANT: Suzuki, Yoshitaka  
APPLICANT: Tanihata, Masao  
TITLE OF INVENTION: A peptide and Osteogenic Accelerator  
FILE REFERENCE: 81918-0001  
CURRENT APPLICATION NUMBER: US/10/619,910  
CURRENT FILING DATE: 2003-07-15  
PRIOR APPLICATION NUMBER: US/09/439,779B  
PRIOR FILING DATE: 2001-09-10  
NUMBER OF SEQ ID NOS: 11  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 8  
LENGTH: 20  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Synthesized peptide  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (5)..(5)  
OTHER INFORMATION: Xaa=Lys, Ser or Thr  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (6)..(6)  
OTHER INFORMATION: Xaa=Ile or Val  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (9)..(9)  
OTHER INFORMATION: Xaa=Ala or Pro  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (12)..(12)  
OTHER INFORMATION: Xaa=Ala or Val  
FEATURE:  
NAME/KEY: MISC FEATURE  
LOCATION: (17)..(17)  
OTHER INFORMATION: Xaa=Ser or Asn  
US-10-619-910-8

Query Match 71.2%; Score 79; DB 15; Length 20;  
Best Local Similarity 70.0%; Pred. No. 0.0012;  
Matches 14; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy 1 INPEVXPCCAPTOLNAIS 20  
Db 1 INPEVXPCCAPTOLNAIS 20

## RESULT 168

US-10-619-910-4  
Sequence 4, Application US/10619910  
Publication No. US2004005384A1  
GENERAL INFORMATION:  
APPLICANT: Kyocera Corporation  
APPLICANT: Nishimura, Yoshiniko  
APPLICANT: Suzuki, Yoshinaka  
APPLICANT: Tanihara, Masao  
TITLE OF INVENTION: A Peptide and Osteogenic Accelerator  
FILE REFERENCE: 81918-0001  
CURRENT APPLICATION NUMBER: US/10/619,910  
CURRENT FILING DATE: 2003-07-15  
PRIORITY APPLICATION NUMBER: US/09/439,779B  
PRIORITY FILING DATE: 2001-09-10  
NUMBER OF SEQ ID NOS: 11  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 4  
LENGTH: 22  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Synthesized peptide  
NAME/KEY: MISC\_FEATURE  
LOCATION: (7)..(7)  
OTHER INFORMATION: Xaa=Iys, Ser or Thr  
FEATURE:  
NAME/KEY: MISC\_FEATURE  
LOCATION: (8)..(8)  
OTHER INFORMATION: Xaa=Ile or Val  
FEATURE:  
NAME/KEY: MISC\_FEATURE  
LOCATION: (11)..(11)  
OTHER INFORMATION: Xaa=Ala or Pro  
FEATURE:  
NAME/KEY: MISC\_FEATURE  
LOCATION: (14)..(14)  
OTHER INFORMATION: Xaa=Ala or Val  
FEATURE:  
NAME/KEY: MISC\_FEATURE  
LOCATION: (19)..(19)  
OTHER INFORMATION: Xaa= Ser or Asn  
US-10-619-910-4

Query Match 70.3%; Score 78; DB 15; Length 22;  
Best Local Similarity 65.0%; Pred. No. 0.0018;  
Matches 13; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy 1 INPEVXPCCAPTOLNAIS 20  
Db 3 VNEPXXPKCCXPTLXAIS 22

## RESULT 169

US-10-187-394-9  
Sequence 9, Application US/10187394  
Publication No. US20030176667A1  
GENERAL INFORMATION:  
APPLICANT: KECK, PETER  
APPLICANT: SMART, JOHN  
TITLE OF INVENTION: SINGLE CHAIN ANALOGS OF TGF-B  
TITLE OF INVENTION: SUPERFAMILY (MORPHONS)

NUMBER OF SEQUENCES: 45  
CORRESPONDENCE ADDRESS:  
ADDRESSER: PATENT ADMINISTRATOR; TESTA, HURWITZ &  
ADDRESSER: THIBEAULT, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/187,394

FILING DATE: 28-JUNE-2002

CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/496,398

FILING DATE: 02-FEB-2000

CLASSIFICATION:

APPLICATION NUMBER: US 08/478,097

FILING DATE: 07-JUN-1995

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: PITCHER, ESO, EDMUND R

REGISTRATION NUMBER: 27,829

REFERENCE/DOCKET NUMBER: STX-059CN

TELEPHONE: 617-248-7000

TELEFAX: 617-248-7100

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:

LENGTH: 102 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:

NAME/KEY: Protein

LOCATION: 1..102

OTHER INFORMATION: /note="60A SEQUENCE"

Query Match 69.4%; Score 77; DB 14; Length 102;  
Best Local Similarity 63.2%; Pred. No. 0.011;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

Qy 1 INPEVXPCCAPTOLNAI 19  
Db 57 LEPPKVPCCAPTOLNAL 75

## RESULT 170

US-09-389-705-14  
Sequence 14, Application US/09389705  
Publication No. US20010018509A1  
GENERAL INFORMATION:  
APPLICANT: JOHNS HOPKINS UNIVERSITY  
TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3  
NUMBER OF SEQUENCES: 29  
CORRESPONDENCE ADDRESS:  
ADDRESSER: SPENSLEY HORN JUBAS & LUBITZ  
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR  
CITY: LOS ANGELES  
STATE: CALIFORNIA  
COUNTRY: US  
ZIP: 90067  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS

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SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
  APPLICATION NUMBER: US/09/389,705
  FILING DATE: 03-Sep-1999
  CLASSIFICATION: <Unknown>
  PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 09/153,733
    FILING DATE: <Unknown>
  ATTORNEY/AGENT INFORMATION:
    NAME: WETHERELL, JR. Ph.D., JOHN R.
    REGISTRATION NUMBER: 31,678
    REFERENCE/DOCKET NUMBER: FD2279 PCT
  TELECOMMUNICATION INFORMATION:
    TELEPHONE: (619) 455-5100
    TELEFAX: (619) 455-5110
  INFORMATION FOR SEQ ID NO: 14:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 118 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      IMMEDIATE SOURCE:
        CLONE: 60A
      FEATURE:
        NAME/KEY: Protein
        LOCATION: 1..118
        SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-09-389-705-14

Query Match      69.4%; Score 77; DB 9; Length 118;
Best Local Similarity 63.2%; Pred. No. 0.012;
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTOLNMI 19
DB      73 LEPKVKVPCCAPTRLGAL 91

RESULT 171
US-10-115-406-12
  Sequence 12, Application US/10115406
  Publication No. US20020127612A1
  GENERAL INFORMATION:
    APPLICANT: THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE
    APPLICANT: LEE, Se-Jin
    TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
    FILE REFERENCE: JHU1190-3
    CURRENT APPLICATION NUMBER: US/10/115,406
    PRIOR APPLICATION NUMBER: 09/301,520
    PRIOR FILING DATE: 1999-04-28
    PRIOR APPLICATION NUMBER: US 09/1172,062
    PRIOR FILING DATE: 1998-10-13
    PRIOR APPLICATION NUMBER: US 08/491,835
    PRIOR FILING DATE: 1995-10-23
    PRIOR APPLICATION NUMBER: PCT/US94/00685
    PRIOR FILING DATE: 1994-01-12
    PRIOR APPLICATION NUMBER: US 08/003,303
    PRIOR FILING DATE: 1993-01-12
    NUMBER OF SEQ ID NOS: 28
    SOFTWARE: Patentin version 3.0
    SEQ ID NO 12
    LENGTH: 118
    TYPE: PRT
  ORGANISM: Drosophila melanogaster
US-10-115-406-12

Query Match      69.4%; Score 77; DB 13; Length 118;
Best Local Similarity 63.2%; Pred. No. 0.012;
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;
```

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DB      73 LEPKVKVPCCAPTRLGAL 91

RESULT 172
US-10-154-333-14
  Sequence 14, Application US/10154333
  Publication No. US20030109684A1
  GENERAL INFORMATION:
    APPLICANT: JOHNS HOPKINS UNIVERSITY
    TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-3
    NUMBER OF SEQUENCES: 29
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: SPENSLEY HORN JUBAS & LUBITZ
      STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
      CITY: LOS ANGELES
      STATE: CALIFORNIA
      COUNTRY: US
      ZIP: 90067
  COMPUTER READABLE FORM:
    MEDIUM TYPE: Floppy disk
    COMPUTER: IBM PC compatible
    OPERATING SYSTEM: PC-DOS/MS-DOS
    SOFTWARE: Patentin Release #1.0, Version #1.25
  CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/10/154,333
    FILING DATE: 21-May-2002
    CLASSIFICATION: <Unknown>
  PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US/09/389,705
    FILING DATE: 03-Sep-1999
    APPLICATION NUMBER: 09/153,733
    FILING DATE: <Unknown>
  ATTORNEY/AGENT INFORMATION:
    NAME: WETHERELL, JR. Ph.D., JOHN R.
    REGISTRATION NUMBER: 31,678
    REFERENCE/DOCKET NUMBER: FD2279 PCT
  TELECOMMUNICATION INFORMATION:
    TELEPHONE: (619) 455-5100
    TELEFAX: (619) 455-5110
  INFORMATION FOR SEQ ID NO: 14:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 118 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
      MOLECULE TYPE: protein
      IMMEDIATE SOURCE:
        CLONE: 60A
      FEATURE:
        NAME/KEY: Protein
        LOCATION: 1..118
        SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-10-154-333-14

Query Match      69.4%; Score 77; DB 14; Length 118;
Best Local Similarity 63.2%; Pred. No. 0.012;
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTOLNMI 19
DB      73 LEPKVKVPCCAPTRLGAL 91

RESULT 173
US-10-704-223-12
  Sequence 12, Application US/10704223
  Publication No. US20040152143A1
  GENERAL INFORMATION:
    APPLICANT: THE JOHNS HOPKINS UNIVERSITY
    APPLICANT: LEE, Se-Jin
    TITLE OF INVENTION: GROWTH DIFFERENTIATION FACTOR-9
    FILE REFERENCE: JHU1190-7
```

;; CURRENT APPLICATION NUMBER: US/10/704,223  
;; CURRENT FILING DATE: 2003-11-07  
;; PRIOR APPLICATION NUMBER: US 16/115,406  
;; PRIOR FILING DATE: 2002-04-02  
;; PRIOR APPLICATION NUMBER: US 09/301,520  
;; PRIOR FILING DATE: 1999-04-28  
;; PRIOR APPLICATION NUMBER: US 09/172,062  
;; PRIOR FILING DATE: 1998-10-13  
;; PRIOR APPLICATION NUMBER: US 08/491,835  
;; PRIOR FILING DATE: 1995-10-23  
;; PRIOR APPLICATION NUMBER: PCT/US94/00685  
;; PRIOR FILING DATE: 1994-01-12  
;; PRIOR APPLICATION NUMBER: US 08/003,303  
;; PRIOR FILING DATE: 1993-01-12  
;; NUMBER OF SEQ ID NOS: 28  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 12  
;; LENGTH: 118  
;; TYPE: PRT  
;; ORGANISM: Drosophila melanogaster  
US-10-704-223-12

Query Match 69.4%; Score 77; DB 16; Length 118;  
Best Local Similarity 63.2%; Pred. No. 0.012;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNAI 19  
Db 73 LEKRVKPCCAPTRLGAL 91

RESULT 174  
US-08-260-675-25  
;; Sequence 25, Application US/08260675  
;; Publication No. US20030104999A1  
;; GENERAL INFORMATION:  
;; APPLICANT: RUEGER, DAVID C  
;; APPLICANT: KUBERSAMPATH, THIANGAVEL  
;; APPLICANT: OPPERMANN, HERMANN  
;; APPLICANT: OZKAYNAK, ENGIN  
;; APPLICANT: PANG, ROY HL  
;; APPLICANT: COHEN, CHARLES M  
;; TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
;; TITLE OF INVENTION: REPAIR  
;; NUMBER OF SEQUENCES: 33  
;; CORRESPONDENCE ADDRESS:  
;; ADDRESSEE: TESTA HURWITZ & THIBEAULT  
;; STREET: 55 STATE STREET  
;; CITY: BOSTON  
;; STATE: MA  
;; COUNTRY: USA  
;; ZIP: 02140  
;; COMPUTER READABLE FORM:  
;; MEDIUM TYPE: floppy disk  
;; COMPUTER: IBM PC compatible  
;; OPERATING SYSTEM: PC-DOS/MS-DOS  
;; SOFTWARE: PatentIn Release #1.0, Version #1.25  
;; CURRENT APPLICATION DATA:  
;; APPLICATION NUMBER: US/08/260,675  
;; FILING DATE:  
;; CLASSIFICATION: 435  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US/08/126,100  
;; FILING DATE:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US/07/922,813  
;; FILING DATE:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/667,274  
;; FILING DATE: 11-MAR-1991  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US 07/752,764  
;; FILING DATE: 30-AUG-1991

;; ATTORNEY/AGENT INFORMATION:  
;; NAME: PITCHER ESQ, EDMUND R  
;; REGISTRATION NUMBER: 27,829  
;; REFERENCE/DOCKET NUMBER: CRP-070  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 617/248-7000  
;; TELEFAX: 617/248-7100  
;; INFORMATION FOR SEQ ID NO: 25:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 455 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-08-260-675-25

Query Match 69.4%; Score 77; DB 8; Length 455;  
Best Local Similarity 63.2%; Pred. No. 0.044;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNAI 19  
Db 410 LEKRVKPCCAPTRLGAL 428

RESULT 175  
US-09-952-318A-25  
;; Sequence 25, Application US/09952318A  
;; Publication No. US20030224979A1  
;; GENERAL INFORMATION:  
;; APPLICANT: Kubersampath et al.  
;; TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
;; FILE REFERENCE: JJJ-P06-522  
;; CURRENT APPLICATION NUMBER: US/09/952,318A  
;; CURRENT FILING DATE: 2001-09-13  
;; PRIOR APPLICATION NUMBER: 09/170,936  
;; PRIOR FILING DATE: 1998-10-13  
;; PRIOR APPLICATION NUMBER: 08/432,883  
;; PRIOR FILING DATE: 1995-05-02  
;; PRIOR APPLICATION NUMBER: 08/115,914  
;; PRIOR FILING DATE: 1993-09-01  
;; PRIOR APPLICATION NUMBER: 07/923,780  
;; PRIOR FILING DATE: 1992-07-31  
;; PRIOR APPLICATION NUMBER: 07/752,847  
;; PRIOR FILING DATE: 1991-08-30  
;; PRIOR APPLICATION NUMBER: 07/667,274  
;; PRIOR FILING DATE: 1991-03-11  
;; NUMBER OF SEQ ID NOS: 33  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 25  
;; LENGTH: 455  
;; TYPE: PRT  
;; ORGANISM: Drosophila melanogaster  
US-09-952-318A-25

Query Match 69.4%; Score 77; DB 10; Length 455;  
Best Local Similarity 63.2%; Pred. No. 0.044;  
Matches 12; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

Qy 1 INPETHKPCCAPTQLNAI 19  
Db 410 LEKRVKPCCAPTRLGAL 428

RESULT 176  
US-10-122-026-16  
;; Sequence 16, Application US/10122026  
;; Publication No. US20030105004A1  
;; GENERAL INFORMATION:  
;; APPLICANT: JONES, WILLIAM K  
;; TUCKER, RONALD F  
;; RUEGER, DAVID C  
;; OPPERMANN, HERMANN





```
APPLICANT: Tanihara, Masao
TITLE OF INVENTION: A Peptide and Osteogenic Accelerator
FILE REFERENCE: 81918-0001
CURRENT APPLICATION NUMBER: US/10/619,910
CURRENT FILING DATE: 2003-07-15
PRIORITY APPLICATION NUMBER: US/09/439,779B
PRIORITY FILING DATE: 2001-09-10
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PatentIn version 3.1
SEQ ID NO 7
LENGTH: 19
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Synthesized peptide
NAME/KEY: MISC_FEATURE
LOCATION: (5)..(5)
OTHER INFORMATION: Xaa=Lys, Ser or Thr
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (6)..(6)
OTHER INFORMATION: Xaa=Ile or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (9)..(9)
OTHER INFORMATION: Xaa=Ala or Pro
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (12)..(12)
OTHER INFORMATION: Xaa=Ala or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (17)..(17)
OTHER INFORMATION: Xaa=Ser or Asn
US-10-619-910-7

Query Match      67.6%; Score 75; DB 15; Length 19;
Best Local Similarity 68.4%; Pred. No. 0.003;
Matches 13; Conservative 1; Mismatches 5; Indels 0; Gaps 0;

Qy      1 INPETHKPCCAPTQLNAI 19
Db      1 INPETHKPCCAPTQLNAI 19

RESULT 179
US-10-619-910-3
Sequence 3, Application US/10619910
Publication No. US20040053844A1
GENERAL INFORMATION:
APPLICANT: Kyocera Corporation
APPLICANT: Suzuki, Yoshihiko
APPLICANT: Tanihara, Masao
TITLE OF INVENTION: A Peptide and Osteogenic Accelerator
FILE REFERENCE: 81918-0001
CURRENT APPLICATION NUMBER: US/10/619,910
CURRENT FILING DATE: 2003-07-15
PRIORITY APPLICATION NUMBER: US/09/439,779B
PRIORITY FILING DATE: 2001-09-10
NUMBER OF SEQ ID NOS: 11
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 21
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Synthesized peptide
NAME/KEY: MISC_FEATURE
LOCATION: (7)..(7)
OTHER INFORMATION: Xaa=Lys, Ser or Thr
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FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (8)..(8)
OTHER INFORMATION: Xaa=Ile or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (11)..(11)
OTHER INFORMATION: Xaa=Ala or Pro
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (14)..(14)
OTHER INFORMATION: Xaa=Ala or Val
FEATURE:
NAME/KEY: MISC_FEATURE
LOCATION: (19)..(19)
OTHER INFORMATION: Xaa=Ser or Asn
US-10-619-910-3

Query Match      66.7%; Score 74; DB 15; Length 21;
Best Local Similarity 63.2%; Pred. No. 0.0058;
Matches 12; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy      1 INPETHKPCCAPTQLNAI 19
Db      3 VNPETHKPCCAPTQLNAI 21

RESULT 180
US-10-074-978A-301
Sequence 301, Application US/10074978A
Publication No. US20040010119A1
GENERAL INFORMATION:
APPLICANT: Lete, Mario
APPLICANT: Spytek, Kimberly A
APPLICANT: Guo, Xiaojia (Sasha)
APPLICANT: Fernandes, Elma
APPLICANT: Li, Li
APPLICANT: Kekuda, Ramesh
APPLICANT: Liu, Xiahong
APPLICANT: Casman, Stacie
APPLICANT: Boldog, Ferenc
APPLICANT: Patutajan, Meera
APPLICANT: Blalock, Angela
APPLICANT: Ballinger, Robert
APPLICANT: Vernet, Corine
APPLICANT: Tcherenev, Velizar T
APPLICANT: Malyankar, Uriel M
APPLICANT: Gusev, Vladimir
APPLICANT: Rastelli, Luca
APPLICANT: Mezes, Peter S
APPLICANT: Ellerman, Karen
APPLICANT: Heyes, Melvin P
APPLICANT: Herrman, John
APPLICANT: Pena, Carol E A
APPLICANT: Shimkets, Richard A
APPLICANT: Taupier Jr, Raymond J
APPLICANT: Moore, No. US20040010119A111e
APPLICANT: Shenoy, Suresh
APPLICANT: Edinger, Shlomit
APPLICANT: Gunther, Erik
APPLICANT: Stone, Dave
APPLICANT: Millet, Isabelle
APPLICANT: Peyman, John
APPLICANT: Smithson, Glenda
TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
FILE REFERENCE: 21402-269
CURRENT APPLICATION NUMBER: US/10/074,978A
CURRENT FILING DATE: 2003-01-07
PRIORITY APPLICATION NUMBER: 60/258,221
PRIORITY FILING DATE: 2001-02-12
PRIORITY APPLICATION NUMBER: 60/335,109
PRIORITY FILING DATE: 2001-10-31
PRIORITY APPLICATION NUMBER: 60/312,284
```

PRIOR FILING DATE: 2001-08-14  
PRIOR APPLICATION NUMBER: 60/268,496  
PRIOR FILING DATE: 2001-02-13  
PRIOR APPLICATION NUMBER: 60/276,703  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/350,293  
PRIOR FILING DATE: 2001-10-18  
PRIOR APPLICATION NUMBER: 60/322,127  
PRIOR FILING DATE: 2001-11-21  
PRIOR APPLICATION NUMBER: 60/280,899  
PRIOR FILING DATE: 2001-04-02  
PRIOR APPLICATION NUMBER: 60/310,797  
PRIOR FILING DATE: 2001-08-08  
PRIOR APPLICATION NUMBER: 60/268,646  
PRIOR FILING DATE: 2001-02-14  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 547  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 301  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-074-978A-301

Query Match 65.8%; Score 73; DB 15; Length 102;  
Best Local Similarity 57.9%; Pred. No. 0.036;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 2 NPETVPKCCAPQOLNAIS 20  
Db 58 NPRAVPOCCVPTKLSPLS 76

RESULT 181  
US-10-080-334-209  
Sequence 209, Application US/10080334  
Publication No. US20040002584A1  
GENERAL INFORMATION:  
APPLICANT: Pena, Carol E. A.  
APPLICANT: Shimkets, Richard A  
APPLICANT: Li, Li  
APPLICANT: Shenoy, Suresh G  
APPLICANT: Kekuda, Ramesh  
APPLICANT: Spytek, Kimberly A  
APPLICANT: Vernet, Corine A. M.  
APPLICANT: Malyanar, Uriel M  
APPLICANT: Guo, Xiaojia  
APPLICANT: Gusev, Vladimir Y  
APPLICANT: Casman, Stacie J  
APPLICANT: Boldog, Ferenc L  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Tchervnev, Velizar T  
APPLICANT: Patturajan, Meera  
APPLICANT: Gangoli, Esha A  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Liu, Xiaohong  
APPLICANT: Baumgartner, Jason C.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Spaderna, Steven K  
APPLICANT: Zernusen, Bryan D  
TITLE OF INVENTION: Proteins, Polynucleotides Encoding Them and Methods of  
FILE REFERENCE: 21402-275  
CURRENT APPLICATION NUMBER: US/10/080,334  
PRIOR FILING DATE: 2002-02-21  
PRIOR APPLICATION NUMBER: 60/270,523  
PRIOR FILING DATE: 2001-02-21  
PRIOR APPLICATION NUMBER: 60/322,712  
PRIOR FILING DATE: 2001-09-17  
PRIOR APPLICATION NUMBER: 60/311,980  
PRIOR FILING DATE: 2001-08-13  
PRIOR APPLICATION NUMBER: 60/330,307  
PRIOR FILING DATE: 2001-10-18

PRIOR APPLICATION NUMBER: 60/278,796  
PRIOR FILING DATE: 2001-03-26  
PRIOR APPLICATION NUMBER: 60/281,521  
PRIOR FILING DATE: 2001-04-04  
PRIOR APPLICATION NUMBER: 60/276,677  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/311,595  
PRIOR FILING DATE: 2001-08-10  
PRIOR APPLICATION NUMBER: 60/270,220  
PRIOR FILING DATE: 2001-02-21  
PRIOR APPLICATION NUMBER: 60/274,295  
PRIOR FILING DATE: 2001-03-08  
PRIOR APPLICATION NUMBER: 60/318,526  
PRIOR FILING DATE: 2001-09-10  
PRIOR APPLICATION NUMBER: 60/286,548  
PRIOR FILING DATE: 2001-04-25  
PRIOR APPLICATION NUMBER: 60/291,765  
PRIOR FILING DATE: 2001-05-17  
PRIOR APPLICATION NUMBER: 60/270,797  
PRIOR FILING DATE: 2001-02-23  
PRIOR APPLICATION NUMBER: 60/276,400  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/270,810  
PRIOR FILING DATE: 2001-02-23  
NUMBER OF SEQ ID NOS: 388  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 209  
LENGTH: 105  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-080-334-209

Query Match 65.8%; Score 73; DB 15; Length 105;  
Best Local Similarity 57.9%; Pred. No. 0.037;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 2 NPETVPKCCAPQOLNAIS 20  
Db 61 NPRAVPOCCVPTKLSPLS 79

RESULT 182  
US-10-072-012-832  
Sequence 832, Application US/10072012  
Publication No. US20040033493A1  
GENERAL INFORMATION:  
APPLICANT: Tchervnev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zernusen, Bryan  
APPLICANT: Patturajan, Meera  
APPLICANT: Shimkets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangoli, Esha  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Rastelli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Taubier, Jr., Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Coleman, Steven D.  
APPLICANT: Wolenc, Adam R.  
APPLICANT: Pena, Carol E. A  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Grosche, William M.  
APPLICANT: Alsobrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Burgess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
PRIOR FILING DATE: 2002-01-31

PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 832  
LENGTH: 105  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor beta like domain  
US-10-072-012-832

Query Match 65.8%; Score 73; DB 15; Length 105;  
Best Local Similarity 57.9%; Pred. No. 0.037;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

OY 2 NPETVPRKCCAPFQNLMAIS 20  
DB 61 NPAVPPQCCVPTKLSPLS 79

RESULT 183  
US-10-072-012-834  
Sequence 834, Application US/10072012  
Publication No. US2004003493A1  
GENERAL INFORMATION:  
APPLICANT: Tcherenev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zehnusen, Bryan  
APPLICANT: Patturajan, Meera  
APPLICANT: Shinkets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangoli, Esha  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Raselli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie E.  
APPLICANT: Taupier Jr, Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Coleman, Steven D.  
APPLICANT: Wolenc, Adam R.  
APPLICANT: Pena, Carol E. A  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Grose, William M.  
APPLICANT: Alsobrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Bugess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
CURRENT FILING DATE: 2002-01-31

PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 834  
LENGTH: 105  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor beta like domain  
US-10-072-012-834

Query Match 65.8%; Score 73; DB 15; Length 105;  
Best Local Similarity 57.9%; Pred. No. 0.037;  
Matches 11; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

OY 2 NPETVPRKCCAPFQNLMAIS 20  
DB 61 NPAVPPQCCVPTKLSPLS 79

RESULT 184  
US-09-930-512-77  
Sequence 77, Application US/09930512  
Publication No. US20040010118A1  
GENERAL INFORMATION:  
APPLICANT: Zehnusen, Bryan D  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Spytek, Kimberly  
APPLICANT: Spaderna, Steven  
APPLICANT: Gangoli, Esha A  
APPLICANT: Raselli, Luca  
APPLICANT: Burgess, Catherine E  
APPLICANT: Majumder, Kunud  
APPLICANT: Shinkets, Richard  
APPLICANT: Mishra, Vishnu  
APPLICANT: Vernet, Corine  
APPLICANT: Szekeres, Edward S  
APPLICANT: Grose, William M  
APPLICANT: Alsobrook II, John P  
APPLICANT: Lin, Xiaohong  
APPLICANT: Gerlach, Valerie L  
APPLICANT: Ellerman, Karen  
APPLICANT: Smithson, Glenda  
APPLICANT: Peyman, John  
APPLICANT: Stone, David  
APPLICANT: MacDougall, John  
TITLE OF INVENTION: No. US20040010118A1 Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-091  
CURRENT APPLICATION NUMBER: US/09/930,512  
CURRENT FILING DATE: 2001-08-15  
PRIOR APPLICATION NUMBER: 60/225,692  
PRIOR FILING DATE: 2000-08-16

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; PRIOR APPLICATION NUMBER: 60/225,837
; PRIOR FILING DATE: 2000-08-16
; PRIOR APPLICATION NUMBER: 60/225,693
; PRIOR FILING DATE: 2000-08-16
; PRIOR APPLICATION NUMBER: 60/226,236
; PRIOR FILING DATE: 2000-08-18
; PRIOR APPLICATION NUMBER: 60/226,353
; PRIOR FILING DATE: 2000-08-18
; PRIOR APPLICATION NUMBER: 60/227,085
; PRIOR FILING DATE: 2000-08-22
; PRIOR APPLICATION NUMBER: 60/227,395
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: 60/227,492
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/227,600
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: 60/275,952
; PRIOR FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 115
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 77
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-330-512-77

Query Match      64.9%; Score 72; DB 11; Length 102;
Best Local Similarity 55.0%; Pred. No. 0.048;
Matches 11; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNALS 20
DB      57 LDPGAVPRPCVPTLSPLS 76

RESULT 185
US-10-080-334-210
; Sequence 210, Application US/10080334
; Publication No. US20040002584A1
; GENERAL INFORMATION:
; APPLICANT: Pena, Carol E. A.
; APPLICANT: Shinkets, Richard A
; APPLICANT: Li, Li
; APPLICANT: Shenoy, Suresh G
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Verneet, Corine A. M.
; APPLICANT: Malyankar, Uriel M
; APPLICANT: Guo, Xiaojia
; APPLICANT: Gusev, Vladimir Y
; APPLICANT: Casman, Stacie J
; APPLICANT: Boldog, Ferenc L
; APPLICANT: Furtak, Katarzyna T
; APPLICANT: Tchernev, Velizar T
; APPLICANT: Patnujan, Meera
; APPLICANT: Gangoli, Esha A
; APPLICANT: Padigaru, Muralidhara
; APPLICANT: Liu, Xiaohong
; APPLICANT: Baumgartner, Jason C.
; APPLICANT: Gerlach, Valerie
; APPLICANT: Spaderma, Steven K
; APPLICANT: Zehrsen, Bryan D
; TITLE OF INVENTION: Proteins, Polynucleotides Encoding Them and Methods of
; FILE REFERENCE: 21402-275
; CURRENT APPLICATION NUMBER: US/10/080,334
; CURRENT FILING DATE: 2002-02-21
; PRIOR APPLICATION NUMBER: 60/270,523
; PRIOR FILING DATE: 2001-02-21
; PRIOR APPLICATION NUMBER: 60/322,712
; PRIOR FILING DATE: 2001-09-17
; PRIOR APPLICATION NUMBER: 60/311,960
; PRIOR FILING DATE: 2001-06-13
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; PRIOR APPLICATION NUMBER: 60/330,307
; PRIOR FILING DATE: 2001-10-18
; PRIOR APPLICATION NUMBER: 60/278,796
; PRIOR FILING DATE: 2001-03-26
; PRIOR APPLICATION NUMBER: 60/281,521
; PRIOR FILING DATE: 2001-04-04
; PRIOR APPLICATION NUMBER: 60/276,677
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/311,595
; PRIOR FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: 60/270,220
; PRIOR FILING DATE: 2001-02-21
; PRIOR APPLICATION NUMBER: 60/274,295
; PRIOR FILING DATE: 2001-03-08
; PRIOR APPLICATION NUMBER: 60/318,526
; PRIOR FILING DATE: 2001-09-10
; PRIOR APPLICATION NUMBER: 60/286,548
; PRIOR FILING DATE: 2001-04-25
; PRIOR APPLICATION NUMBER: 60/291,765
; PRIOR FILING DATE: 2001-05-17
; PRIOR APPLICATION NUMBER: 60/270,797
; PRIOR FILING DATE: 2001-02-23
; PRIOR APPLICATION NUMBER: 60/276,400
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/270,810
; PRIOR FILING DATE: 2001-02-23
; NUMBER OF SEQ ID NOS: 388
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 210
; LENGTH: 102
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-080-334-210

Query Match      64.9%; Score 72; DB 15; Length 102;
Best Local Similarity 55.0%; Pred. No. 0.048;
Matches 11; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 INPETHKPCCAPTQLNALS 20
DB      57 LDPGAVPRPCVPTLSPLS 76

RESULT 186
US-10-074-978A-300
; Sequence 300, Application US/10074978A
; Publication No. US20040010119A1
; GENERAL INFORMATION:
; APPLICANT: Leite, Mario
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Guo, Xiaojia (Sasha)
; APPLICANT: Fernandes, Elma
; APPLICANT: Li, Li
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Tchernev, Velizar T
; APPLICANT: Casman, Stacie
; APPLICANT: Boldog, Ferenc
; APPLICANT: Patnujan, Meera
; APPLICANT: Blalock, Angela
; APPLICANT: Ballinger, Robert
; APPLICANT: Verneet, Corine
; APPLICANT: Tchernev, Velizar T
; APPLICANT: Malyankar, Uriel M
; APPLICANT: Gusev, Vladimir
; APPLICANT: Rastelli, Luca
; APPLICANT: Mezes, Peter S
; APPLICANT: Elleman, Karen
; APPLICANT: Heyes, Melvin P
; APPLICANT: Herrman, John
; APPLICANT: Pena, Carol E A
; APPLICANT: Shinkets, Richard A
; APPLICANT: Taupier Jr, Raymond J
; APPLICANT: Moore, No. US20040010119A111e
```

APPLICANT: Shenoy, Suresh  
APPLICANT: Baidner, Shicmit  
APPLICANT: Gunther, Erik  
APPLICANT: Stone, Dave  
APPLICANT: Millet, Isabelle  
APPLICANT: Peyman, John  
APPLICANT: Smithson, Glenda  
TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME  
FILE REFERENCE: 21402-269  
CURRENT APPLICATION NUMBER: US/10/074,978A  
CURRENT FILING DATE: 2003-01-07  
PRIOR APPLICATION NUMBER: 60/268,221  
PRIOR FILING DATE: 2001-02-12  
PRIOR APPLICATION NUMBER: 60/335,109  
PRIOR FILING DATE: 2001-10-31  
PRIOR APPLICATION NUMBER: 60/312,284  
PRIOR FILING DATE: 2001-08-14  
PRIOR APPLICATION NUMBER: 60/268,496  
PRIOR FILING DATE: 2001-02-13  
PRIOR APPLICATION NUMBER: 60/276,703  
PRIOR FILING DATE: 2001-03-16  
PRIOR APPLICATION NUMBER: 60/330,293  
PRIOR FILING DATE: 2001-10-18  
PRIOR APPLICATION NUMBER: 60/332,127  
PRIOR FILING DATE: 2001-11-21  
PRIOR APPLICATION NUMBER: 60/280,899  
PRIOR FILING DATE: 2001-04-02  
PRIOR APPLICATION NUMBER: 60/310,797  
PRIOR FILING DATE: 2001-08-08  
PRIOR APPLICATION NUMBER: 60/268,646  
PRIOR FILING DATE: 2001-02-14  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 547  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 300  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor beta like domain sequence  
US-10-074-978A-300

Query Match 64.9%; Score 72; DB 15; Length 102;  
Best Local Similarity 55.0%; Pred. No. 0.048; 4; Indels 0; Gaps 0;  
Matches 11; Conservative 5; Mismatches 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 57 LDPGAVPKPCVPTKLSPLS 76

RESULT 187  
US-10-072-012-831  
Sequence 831, Application US/10072012  
Publication No. US20040033493A1  
GENERAL INFORMATION:  
APPLICANT: Tcherev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zernusen, Bryan  
APPLICANT: Patturajan, Meera  
APPLICANT: Shmukets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangolli, Esba  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Rastelli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Taupier Jr, Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Colman, Steven D.  
APPLICANT: Wolenc, Adam R.

APPLICANT: Pena, Carol E. A  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Grosse, William M.  
APPLICANT: Alebrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Burgess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
CURRENT FILING DATE: 2002-01-31  
PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 831  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: growth factor-beta (TGF-beta) family  
US-10-072-012-831

Query Match 64.9%; Score 72; DB 15; Length 102;  
Best Local Similarity 55.0%; Pred. No. 0.048; 4; Indels 0; Gaps 0;  
Matches 11; Conservative 5; Mismatches 0;

QY 1 INPETYKPCCAPTOLNAIS 20  
DB 57 LDPGAVPKPCVPTKLSPLS 76

RESULT 188  
US-10-072-012-833  
Sequence 833, Application US/10072012  
Publication No. US20040033493A1  
GENERAL INFORMATION:  
APPLICANT: Tcherev, Velizar  
APPLICANT: Spytek, Kimberly  
APPLICANT: Zernusen, Bryan  
APPLICANT: Patturajan, Meera  
APPLICANT: Shmukets, Richard  
APPLICANT: Li, Li  
APPLICANT: Gangolli, Esba  
APPLICANT: Padigaru, Muralidhara  
APPLICANT: Anderson, David W.  
APPLICANT: Rastelli, Luca  
APPLICANT: Miller, Charles E.  
APPLICANT: Gerlach, Valerie  
APPLICANT: Taupier Jr, Raymond J.  
APPLICANT: Gusev, Vladimir Y.  
APPLICANT: Colman, Steven D.  
APPLICANT: Wolenc, Adam R.

APPLICANT: Pena, Carol E. A  
APPLICANT: Furtak, Katarzyna  
APPLICANT: Grosse, William M.  
APPLICANT: Alsbrook II, John P.  
APPLICANT: Lepley, Denise M.  
APPLICANT: Rieger, Daniel K.  
APPLICANT: Burgess, Catherine E.  
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
FILE REFERENCE: 21402-258  
CURRENT APPLICATION NUMBER: US/10/072,012  
CURRENT FILING DATE: 2002-01-31  
PRIOR APPLICATION NUMBER: 60/265,102  
PRIOR FILING DATE: 2001-01-30  
PRIOR APPLICATION NUMBER: 60/265,514  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,517  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,412  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/265,395  
PRIOR FILING DATE: 2001-01-31  
PRIOR APPLICATION NUMBER: 60/266,406  
PRIOR FILING DATE: 2001-02-02  
PRIOR APPLICATION NUMBER: 60/266,767  
PRIOR FILING DATE: 2001-02-05  
PRIOR APPLICATION NUMBER: 60/267,057  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/266,975  
PRIOR FILING DATE: 2001-02-07  
PRIOR APPLICATION NUMBER: 60/267,459  
PRIOR FILING DATE: 2001-02-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 1391  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO: 833  
LENGTH: 102  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Transforming  
OTHER INFORMATION: Growth factor-beta (TGF-beta) family  
US-10-072-012-833

Query Match 64.9%; Score 72; DB 15; Length 102;  
Best Local Similarity 55.0%; Pred. No. 0.048; 4; Indels 0; Gaps 0;  
Matches 11; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 57 LDGAVPRKCCVPTKLSPLS 76

RESULT 189  
US-08-260-675-8  
Sequence 8, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERSAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY HU  
APPLICANT: COHEN, CHARLES M  
TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 139 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: Protein  
ORIGINAL SOURCE:  
ORGANISM: MURIDAE  
TISSUE TYPE: EMBRYO  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..139  
OTHER INFORMATION: /label=MOP2-MATURE  
US-08-260-675-8

Query Match 64.9%; Score 72; DB 8; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065; 4; Indels 0; Gaps 0;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
Db 94 MKPDVPRKACCAPTKLSATS 113

RESULT 190  
US-09-952-318A-8  
Sequence 8, Application US/09952318A  
Publication No. US20030224979A1  
GENERAL INFORMATION:  
APPLICANT: KUBERSAMPATH et al.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
TITLE OF INVENTION: METABOLIC BONE DISEASE  
FILE REFERENCE: JUD-P06-522  
CURRENT APPLICATION NUMBER: US/09/952,318A  
CURRENT FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780  
PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847

PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: Patent version 3.1  
SEQ ID NO: 8  
LENGTH: 139  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-952-318A-8

Query Match 64.9%; Score 72; DB 10; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 INPETHPCCAPTOLNAIS 20  
Db 94 MKPDVPRKACCAPTOLNAIS 113

RESULT 191  
US-10-050-050-8  
Sequence 0, Application US/10050050  
Publication No. US20030125230A1

GENERAL INFORMATION:

APPLICANT: COHEN, CHARLES M.  
CHARTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.

TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES

STREET: 45 SOUTH STREET

CITY: HOPKINTON

STATE: MA

COUNTRY: USA

ZIP: 01748

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/050,050

FILING DATE: 15-Jan-2002

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/461,113

FILING DATE: <Unknown>

FILING DATE: 22-MAY-1995

ATTORNEY/AGENT INFORMATION:

NAME: FENTON ESQ., GILLIAN M.

REGISTRATION NUMBER: 36,508

REFERENCE/DOCKET NUMBER: CRP-074DV

TELECOMMUNICATION INFORMATION:

TELEPHONE: (508) 435-9001

TELEFAX: (508) 435-6951

INFORMATION FOR SEQ ID NO: /note= "MOP-2 (MATURE FORM)"

SEQUENCE CHARACTERISTICS:

LENGTH: 139 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE: NAME/KEY: Protein

LOCATION: 1..139  
SEQUENCE DESCRIPTION: SEQ ID NO: 8:  
US-10-050-050-8

Query Match 64.9%; Score 72; DB 14; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 INPETHPCCAPTOLNAIS 20  
Db 94 MKPDVPRKACCAPTOLNAIS 113

RESULT 192

US-10-385-064-8

Sequence 8, Application US/10385064

Publication No. US20040102373A1

GENERAL INFORMATION:

APPLICANT: COHEN, CHARLES M.

APPLICANT: KUBERASAMPATH, THANGAVEL

APPLICANT: RUEGER, DAVID C.

APPLICANT: OPPEMANN, HERMANN

TITLE OF INVENTION: Protein induced Morphogenesis

FILE REFERENCE: CEM-2 DIV. (00960-502 DIV)

CURRENT FILING DATE: 2003-03-10

PRIOR APPLICATION NUMBER: US/10/385,064

PRIOR FILING DATE: 1999-12-15

PRIOR APPLICATION NUMBER: 08/396,684

PRIOR FILING DATE: 1995-03-01

NUMBER OF SEQ ID NOS: 16

SOFTWARE: Patent Ver. 2.0

SEQ ID NO: 8

LENGTH: 139

TYPE: PRT

ORGANISM: Murinae gen. sp.

FEATURE: OTHER INFORMATION: tissue type embryo MOP2-MATURE

US-10-385-064-8

Query Match 64.9%; Score 72; DB 16; Length 139;  
Best Local Similarity 60.0%; Pred. No. 0.065;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 INPETHPCCAPTOLNAIS 20  
Db 94 MKPDVPRKACCAPTOLNAIS 113

RESULT 193

US-08-957-425-27

Sequence 27, Application US/08957425

Publication No. US20030069401A1

GENERAL INFORMATION:

APPLICANT: OPPEMANN, HERMANN

APPLICANT: OKAYNAK, ENGIN

APPLICANT: KUBERASAMPATH, THANGAVEL

APPLICANT: RUEGER, DAVID C.

APPLICANT: PANG, ROY H.L.

TITLE OF INVENTION: OSTEOGENIC DEVICES

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESS:

ADDRESS: TESTA, HURWITZ & THIBEAULT

STREET: 53 STATE STREET

CITY: BOSTON

STATE: MASSACHUSETTS

COUNTRY: U.S.A.

ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25



CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/957,425  
FILING DATE: 24-OCT-1997  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/447,570  
FILING DATE: 21-FEB-1992  
APPLICATION NUMBER: US 810,560  
FILING DATE: 20-DEC-1991  
APPLICATION NUMBER: US 827,052  
FILING DATE: 28-JAN-1992  
APPLICATION NUMBER: US 660,162  
FILING DATE: 22-FEB-1991  
APPLICATION NUMBER: US 621,988  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 621,849  
FILING DATE: 04-DEC-1990  
APPLICATION NUMBER: US 616,374  
FILING DATE: 21-NOV-1990  
APPLICATION NUMBER: US 600,024  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 599,543  
FILING DATE: 18-OCT-1990  
APPLICATION NUMBER: US 579,865  
FILING DATE: 07-SEP-1990  
APPLICATION NUMBER: US 569,920  
FILING DATE: 20-AUG-1990  
APPLICATION NUMBER: US 483,913  
FILING DATE: 22-FEB-1990  
APPLICATION NUMBER: US 422,613  
FILING DATE: 17-OCT-1989  
APPLICATION NUMBER: US 315,342  
FILING DATE: 23-FEB-1988  
APPLICATION NUMBER: US 232,630  
FILING DATE: 15-AUG-1988  
APPLICATION NUMBER: US 179,460  
FILING DATE: 08-APR-1988  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER, EDMUND R.  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-001CP6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 27:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 399 amino acids  
TYPE: amino acid  
MOLECULE TYPE: Protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 27:  
US-08-957-425-27

Query Match 64.9%; Score 72; DB 8; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 354 MKPDVVPKACCAPTKLSATS 373

RESULT 194  
US-08-260-675-23  
Sequence 23, Application US/08260675  
Publication No. US20030104993A1  
GENERAL INFORMATION:  
APPLICANT: RUEGER, DAVID C  
APPLICANT: KUBERASAMPATH, THANGAVEL  
APPLICANT: OPPERMAN, HERMANN  
APPLICANT: OZKAYNAK, ENGIN  
APPLICANT: PANG, ROY HL  
APPLICANT: COHEN, CHARLES M

TITLE OF INVENTION: MORPHOGEN-INDUCED NERVE REGENERATION AND  
TITLE OF INVENTION: REPAIR  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: TESTA HURWITZ & THIBEAULT  
STREET: 55 STATE STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02140  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/260,675  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/126,100  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/07/922,813  
FILING DATE:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/667,274  
FILING DATE: 11-MAR-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: PITCHER ESQ, EDMUND R  
REGISTRATION NUMBER: 27,829  
REFERENCE/DOCKET NUMBER: CRP-070  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 617/248-7000  
TELEFAX: 617/248-7100  
INFORMATION FOR SEQ ID NO: 23:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 399 amino acids  
TYPE: amino acid  
MOLECULE TYPE: Protein  
US-08-260-675-23

Query Match 64.9%; Score 72; DB 8; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNAIS 20  
Db 354 MKPDVVPKACCAPTKLSATS 373

RESULT 195  
US-09-952-318A-23  
Sequence 23, Application US/09952318A  
Publication No. US20030224979A1  
GENERAL INFORMATION:  
APPLICANT: KuberSampath et al.  
TITLE OF INVENTION: TREATMENT TO PREVENT LOSS OF AND/OR INCREASE BONE MASS IN  
FILE REFERENCE: JUD-P06-522  
CURRENT APPLICATION NUMBER: US/09/952,318A  
FILING DATE: 2001-09-13  
PRIOR APPLICATION NUMBER: 09/170,936  
PRIOR FILING DATE: 1998-10-13  
PRIOR APPLICATION NUMBER: 08/432,883  
PRIOR FILING DATE: 1995-05-02  
PRIOR APPLICATION NUMBER: 08/115,914  
PRIOR FILING DATE: 1993-09-01  
PRIOR APPLICATION NUMBER: 07/923,780

PRIOR FILING DATE: 1992-07-31  
PRIOR APPLICATION NUMBER: 07/752,847  
PRIOR FILING DATE: 1991-08-30  
PRIOR APPLICATION NUMBER: 07/667,274  
PRIOR FILING DATE: 1991-03-11  
NUMBER OF SEQ ID NOS: 33  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO: 23  
LENGTH: 399  
TYPE: PRT  
ORGANISM: Mus musculus  
US-09-952-318A-23

Query Match 64.9%; Score 72; DB 10; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 354 MKPDVVPKACCAPTKLSATS 373

RESULT 196  
US-10-122-026-8  
Sequence 8, Application US/10122026  
Publication No. US20030105004A1  
GENERAL INFORMATION:

APPLICANT: JONES, WILLIAM K  
TUCKER, RONALD F  
RUEGER, DAVID C  
OPPERMANN, HERMANN  
OKAYNAK, ENGIN  
KUBERASAMPATH, THANGAVEL  
TITLE OF INVENTION: NOVEL MORPHOGENIC PROTEIN COMPOSITIONS  
OF MATTER

NUMBER OF SEQUENCES: 23  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Patent Administrator, Testa, Hurwitz &  
Thibault, LLP  
STREET: 125 HIGH STREET  
CITY: BOSTON  
STATE: MA  
COUNTRY: USA  
ZIP: 02110

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/122,026  
FILING DATE: 29-AUG-2002  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/402,542  
FILING DATE: 13-MAR-1995  
APPLICATION NUMBER: US 08/840,510  
FILING DATE: 31-MAR-1993  
APPLICATION NUMBER: US 08/029,335  
FILING DATE: 04-MAR-1993  
APPLICATION NUMBER: US 07/971,091  
FILING DATE: 03-NOV-1992  
APPLICATION NUMBER: US 07/946,235  
FILING DATE: 16-SEP-1992  
APPLICATION NUMBER: US 07/938,336  
FILING DATE: 26-AUG-1992  
APPLICATION NUMBER: US 07/923,780  
FILING DATE: 31-JUL-1992  
APPLICATION NUMBER: US 07/752,857  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/752,764  
FILING DATE: 30-AUG-1991  
APPLICATION NUMBER: US 07/667,274

FILING DATE: 11-MAR-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: CAMACHO, JENNIFER A.  
REGISTRATION NUMBER: 43,526  
REFERENCE/DOCKET NUMBER: STK-060CN  
INFORMATION FOR SEQ ID NO: 8:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 399 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 8:  
US-10-122-026-8

Query Match 64.9%; Score 72; DB 14; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTOLNALS 20  
DB 354 MKPDVVPKACCAPTKLSATS 373

RESULT 197  
US-10-050-050-23  
Sequence 23, Application US/10050050  
Publication No. US2003012530A1  
GENERAL INFORMATION:

APPLICANT: COHEN, CHARLES M.  
CHARETTE, MARC F.  
KUBERASAMPATH, THANGAVEL  
RUEGER, DAVID C.  
OPPERMANN, HERMANN  
PANG, ROY H.L.  
OKAYNAK, ENGIN  
SMART, JOHN E.

TITLE OF INVENTION: MORPHOGEN TREATMENT FOR LIMITING  
PROLIFERATION OF EPITHELIAL CELLS.  
NUMBER OF SEQUENCES: 33  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES  
STREET: 45 SOUTH STREET  
CITY: HOPKINTON  
STATE: MA  
COUNTRY: USA  
ZIP: 01748

COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/050,050  
FILING DATE: 15-JAN-2002  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/461,113  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 08/445,882  
FILING DATE: 22-MAY-1995  
ATTORNEY/AGENT INFORMATION:  
NAME: FENTON Esq., GILLIAN M.  
REGISTRATION NUMBER: 36,508  
REFERENCE/DOCKET NUMBER: CRP-074DV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (508) 435-9001  
TELEFAX: (508) 435-6951  
INFORMATION FOR SEQ ID NO: 23:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 399 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 23:  
US-10-050-050-23

Query Match 64.9%; Score 72; DB 14; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
Db 354 MKPDVVPKACCAPTKLSATS 373

## RESULT 198

US-10-350-747-2

Sequence 2, Application US/10350747  
Publication No. US20030153072A1

GENERAL INFORMATION:

APPLICANT: Hogan, Bridgid L.M.

TITLE OF INVENTION: Compositions and Methods of Making

NUMBER OF SEQUENCES: 4

CORRESPONDENCE ADDRESSES:

ADDRESSEE: Panitch Schwarze Jacobs & Nadel, P.C.

STREET: 1601 Market Street, 36th Floor

CITY: Philadelphia

STATE: Pennsylvania

COUNTRY: USA

ZIP: 19103-2398

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/350,747

FILING DATE: 24-Jan-2003

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/808,346

FILING DATE: 28-FEB-1997

ATTORNEY/AGENT INFORMATION:

NAME: Deary P.D., Kathryn

REGISTRATION NUMBER: 36,317

REFERENCE/DOCKET NUMBER: 9823-1

TELECOMMUNICATION INFORMATION:

TELEPHONE: 215-567-2020

TELEFAX: 215-567-2991

TELEX: 831-494

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 399 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 2:

US-10-350-747-2

Query Match 64.9%; Score 72; DB 14; Length 399;  
Best Local Similarity 60.0%; Pred. No. 0.18;  
Matches 12; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 INPETHKPCCAPTQNLN1S 20  
Db 354 MKPDVVPKACCAPTKLSATS 373

## RESULT 199

US-10-321-799-27

Sequence 27, Application US/10321799

Publication No. US200302496A1

GENERAL INFORMATION:

APPLICANT: OPPERMAN, HERMANN

OZKANYAK, ENGIN  
KUBERASAMPATE, THANGAVEL  
RUEGER, DAVID C.  
PANG, ROY H. L.

TITLE OF INVENTION: OSTEOGENIC DEVICES

NUMBER OF SEQUENCES: 33

CORRESPONDENCE ADDRESSES:

ADDRESSEE: TESTA, HURWITZ & THIBEAULT

STREET: 125 HIGH STREET

CITY: BOSTON

STATE: MASSACHUSETTS

COUNTRY: U.S.A.

ZIP: 02110

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/321,799

FILING DATE: 17-Dec-2002

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 09/148,925

FILING DATE: 8-SEP-1998

APPLICATION NUMBER: US 08/449,699

FILING DATE: 24-MAY-1995

APPLICATION NUMBER: US 08/147,023

FILING DATE: 1-NOV-1993

APPLICATION NUMBER: US 07/841,646

FILING DATE: 21-FEB-1992

APPLICATION NUMBER: US 07/827,052

FILING DATE: 28-JAN-1992

APPLICATION NUMBER: US 07/579,865

FILING DATE: 7-SEP-1990

APPLICATION NUMBER: US 07/621,849

FILING DATE: 4-DEC-1990

APPLICATION NUMBER: US 07/621,988

FILING DATE: 4-DEC-1990

APPLICATION NUMBER: US 07/810,560

FILING DATE: 20-DEC-1991

APPLICATION NUMBER: US 07/569,920

FILING DATE: 20-AUG-1990

APPLICATION NUMBER: US 07/600,024

FILING DATE: 18-OCT-1990

APPLICATION NUMBER: US 07/599,543

FILING DATE: 18-OCT-1990

APPLICATION NUMBER: US 07/616,374

FILING DATE: 21-NOV-1990

APPLICATION NUMBER: US 07/483,913

FILING DATE: 22-FEB-1990

APPLICATION NUMBER: US 07/179,406

FILING DATE: 08-APR-1988

APPLICATION NUMBER: US 07/232,630

FILING DATE: 15-AUG-1988

APPLICATION NUMBER: US 07/315,342

FILING DATE: 23-FEB-1989

APPLICATION NUMBER: US 07/660,162

FILING DATE: 22-FEB-1991

APPLICATION NUMBER: US 07/422,659

FILING DATE: 17-OCT-1989

APPLICATION NUMBER: US 07/422,613

FILING DATE: 17-OCT-1989

APPLICATION NUMBER: US 07/422,623

FILING DATE: 17-OCT-1989

ATTORNEY/AGENT INFORMATION:

NAME: DIANA M. STEEL

REGISTRATION NUMBER: 43,153

REFERENCE/DOCKET NUMBER: STK-001CB6C3

TELECOMMUNICATION INFORMATION:

TELEPHONE: 617/248-7000

TELEFAX: 617/248-7100

INFORMATION FOR SEQ ID NO: 27:

